

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

U. S. DEPT. OF AGRICULTURE
NATIONAL AGRICULTURAL LIBRARY

JAN 27 1967

CURRENT SERIAL RECORDS

X

1966 REPORT OF

EGG PRODUCTION TESTS

UNITED STATES AND CANADA

- RANDOM SAMPLE EGG PRODUCTION TESTS,
TWO-YEAR COMBINED SUMMARY, 1964-65 AND 1965-66,
RANGE GROUP RANKINGS, 1965-66

This publication is based upon recommendations of the National Committee on Random Sample Poultry Testing and the Council of American Official Poultry Tests. Information in the report was compiled by the Poultry Research Branch, Animal Husbandry Research Division, Agricultural Research Service, U. S. Department of Agriculture, from data supplied by the Test Supervisors and the Council of American Official Poultry Tests. The statistical analysis for the Combined Summary was made by Biometrical Services, ARS. The publication of this report should not be construed as implying approval or endorsement by the U. S. Department of Agriculture of any of the stocks tested.

FOREWORD

Egg Production Tests are designed to provide a reliable guide for poultrymen, hatcherymen, and breeders concerning the performance of stocks offered for sale by breeders and hatcherymen. This publication contains data on traits of economic importance compiled from results of all official Random Sample Egg Laying Tests in the United States and Canada.

The publication is divided into two categories: 1--Two-Year Combined Summary of Random Sample Test data for the 1964-65 and 1965-66 test years; 2--Range Group Ranking for the 1965-66 test year. The first deals with data obtained from the 1964-65 and 1965-66 Random Sample Egg Production tests. These data have been treated by acceptable statistical procedures and permit direct comparison of stocks that are entered in different tests. The second deals with the results of the 1965-66 Random Sample Egg Production Test, and shows, by "range group ranking," the performance of each entry compared to other entries in the same test.

CONTENTS

	<u>Page</u>
Two-year combined summary.	2
How to tell whether differences are real	2
Explanation of income figures	4
Stocks should be compared for all traits	4
Explanation of terms and abbreviations	4
Definitions of traits and listing of tests that did not report all traits	5
All stocks entered with regressed mean and confidence limits for each trait	6-20
Analytical procedures	21
Analytical data for the traits measured	23
Adjustment factors used to adjust for test differences	24-28
Random sample egg production tests and supervisors, 1965-66	29
Management summary	30-33
Stocks entered in 1965-66 random sample egg production tests	34-35
Range Group Ranking	36
List of entrants other than breeder of stock.	36
Summary of important data for all random sample egg laying tests	37-40
Range group rank of entries in random sample egg production test	41-51

Information on performance of stocks in Chicken Meat Production Tests can be obtained by writing direct to the tests, as follows: Arkansas Meat Performance Egg Phase and Reproduction Test, Department of Animal Industry and Veterinary Science, University of Arkansas, Fayetteville, Arkansas 72702; Maine Production and Broiler Test, Maine Department of Agriculture, Division of Animal Industry, State House, Augusta, Maine 04330.

Information on performance of turkey stocks in Turkey Meat Production Tests can be obtained by writing to the Poultry Research Branch, Animal Husbandry Research Division, Agricultural Research Center, Beltsville, Maryland 20705, and requesting publication ARS 44-13, Turkey Performance Tests.

TWO-YEAR COMBINED SUMMARY

This summary includes the 2-year combined results of the Random Sample Egg Production Tests conducted in the United States and Canada during 1964-65 and 1965-66. The entries in the various tests start with a random sample of hatching eggs or chicks of the stock being tested. The samples are drawn by prescribed methods to insure that each entry is typical of the stock it represents. All entries within a test are treated the same with respect to housing, feeding, management, and disease control in order to avoid differences in performance due to environment.

All tests are performed according to these basic principles. However, differences among tests and between years, and those caused by climatic conditions and other environmental factors affect the results. For this reason, direct comparison of the results of two stocks in different tests or different years may be misleading.

The primary purpose of this summary is to present test results in a manner that will support sound evaluation of all stocks tested. To accomplish this, the results of all tests are combined, by stocks and by years, with adjustments by accepted statistical procedures for test and year differences and for variation in the amount of information per stock. The results of these computations are published as the regressed mean of each trait for each stock.

Errors of two kinds influence the results of even the most carefully designed and performed tests. The first kind of error is the chance deviation or unavoidable "sampling error" made when a small sample of eggs or chicks represents an entry. The other kind of error is due to uncontrolled or unknown environmental differences between entries that occur in spite of all efforts to treat all entries within a given test as nearly alike as possible. The differences between the results for two entries in a single test for a single year may be due to these chance variations rather than to a real difference in the performance capabilities of the two stocks. The effect of such errors in comparing stocks can be materially reduced by basing comparisons on the combined results of several tests over 2 or more years. If all entries compared were entered in the same tests in both years, the simple averages could be compared directly without adjustment.

The performance data (regressed means) reported in this summary are derived from the results reported by the individual tests for each of the past 2 years. It is unlikely, however, that the means for any stock, even though entered in only 1 test each year, will coincide precisely with the 2-year average performance data as published by the test. The variations are due to adjustments for test differences, year differences, the number of tests and of years entered, and the number of replicates per test. These statistical adjustments allow predictions of what the average performance would have been for each stock had all stocks been entered in all tests each year.

The statistical treatment applied to the test data is designed to reduce the influence of nongenetic variations. However, this cannot be accomplished perfectly. Consequently, estimates or predictions of performance cannot be made with absolute precision. Reliable predictions, within prescribed limitations, can be made as to whether a difference in the reported performance of two stocks represents a real difference in their performance. These predictions involve the use of the confidence interval figures that have been computed for each trait or performance factor reported.

HOW TO TELL WHETHER DIFFERENCES ARE REAL

The range of the confidence limits represents the amount of difference in the performance of two stocks that may be due to chance. If the confidence limits for two regressed means overlap, the two means are not significantly different at the 5-percent level of probability. If the confidence limits for two regressed means do not overlap, the odds are at least 19 in 20 that a real difference exists in the performance of the two stocks.

The following is a partial page of Regressed Means and 80% Confidence Limits as they might appear in this publication.

All Stocks Entered, with Regressed Means and 80% Confidence Limits for each Trait

AGE AT 50% PRODUCTION (Days)		EGG PRODUCTION				INCOME OVER FEED AND CHICK COST (\$)		FEED PER POUND OF EGGS PRODUCED (lbs.)		EGG WEIGHT (oz.)		LARGE AND EXTRA LARGE EGGS (%)		BODY WEIGHT (lbs.)		STOCK CODE
		HEN HOUSED (No.)		HEN DAY (%)												
RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	
175	173 177	204	199 209	64.8	63.7 65.9	2.21 *	2.08 2.34	4.30	4.20 4.40	24.5	24.3 24.7	69.7	67.9 71.5	4.7	4.6 4.8	995
177	175 179	215	208 222	67.9	66.5 69.3	2.12	1.99 2.25	4.21	4.10 4.32	24.7	24.3 25.1	70.1	68.1 72.1	4.3	4.1 4.5	996
184	181 187	200	194 206	60.3	59.2 61.4	2.06	1.91 2.21	4.42	4.31 4.53	25.4	25.1 25.7	76.6	74.6 78.6	5.1	4.8 5.4	997
183	181 185	196	189 203	60.1	59.0 61.2	1.81	1.67 1.95	4.57	4.44 4.70	25.1	24.7 25.5	74.1	71.6 76.6	4.9	4.8 5.0	998
169	166 172	241	236 246	71.2	69.9 72.5	2.62	2.49 2.75	4.08	3.98 4.18	23.9	23.7 24.1	62.4	60.5 64.3	4.6	4.4 4.8	999

* If the confidence limits for two regressed means overlap, the two means are not significantly different at the 5% level.

The use of the above data as a means of evaluating different stocks and traits can be illustrated as follows:

For the trait "Hen-housed Egg Production" the confidence limits for Stock 995 (199 to 209) do not overlap the confidence limits of Stock 999 (236 to 246). Therefore, the regressed means of these two stocks (204 and 241 eggs, respectively) are significantly different at the 5-percent level for this trait. However, when comparing Stock 995 with Stocks 996, 997, and 998, we find that the confidence limits of this stock (199 to 209) overlap the confidence limits of each of the other three stocks (208 to 222, 194 to 206, and 189 to 203, respectively). Thus, the regressed mean of Stock 995 is not significantly different from the regressed means of Stocks 996, 997, and 998 for this trait.

Another example can be shown by using the trait "Feed Per Pound of Eggs Produced." Stock 995, with confidence limits of 4.20 to 4.40, is significantly more efficient for this trait than Stock 998 which has higher confidence limits (4.44 to 4.70) that do not overlap those of Stock 995. Likewise, when comparing Stock 995 with Stock 999 (confidence limits of 3.98 to 4.18), we find that these two sets of confidence limits do not overlap. However, in this example, Stock 995 is significantly less efficient than Stock 999 for this trait. In comparing Stock 995 with Stocks 996 and 997, we find that the confidence limits for all three of these stocks overlap, and consequently these three stocks are not significantly different in this trait at the 5-percent level of probability.

The range of the confidence limits will not necessarily be the same for two different stocks that have the same regressed mean. The number of locations in which a stock is entered, the number of replicate pens per location, the number of years entered, and the accuracy involved in adjusting for location and year effects all have a bearing on the range of the confidence limits for each individual regressed mean.

The "Income Over Feed and Chick Cost" figures reported in this summary represent the sales value of the eggs produced and of the hens at the end of the test minus the cost of the chicks and the feed used during the growing and laying periods. These figures may be useful in comparing the overall performance of stocks but they should not be considered as predictions of "profit" to be obtained under commercial operations. The "income" figures should be reduced by other costs, such as labor, building and equipment depreciation, vaccination, litter, interest, taxes and insurance, to approximate profits that might be expected under commercial conditions. Surveys conducted among commercial producers indicate that such other costs may range from \$1 to \$2 per pullet housed.

Although the average chick price is reported for each stock, this value cannot be appropriately used to convert the "Income Over Feed and Chick Cost" figure to an income over feed cost figure. The average chick price shown is a simple unadjusted average of the prices reported by the entrant for his entries in the various tests and is not directly comparable to chick cost included in "Income Over Feed and Chick Cost."

STOCKS SHOULD BE COMPARED FOR ALL TRAITS

In the use of this report for the evaluation of the overall performance of the various stocks, all traits should be considered. The values reported for "Income Over Feed and Chick Cost" represent a composite of several traits, combined as determined by the economic conditions of the areas in which the tests are located. The conditions under which the stock is expected to perform in commercial production may differ from those prevailing at the tests and such differences should be taken into consideration. For example, a poultryman whose local market pays unusually good premiums for large and extra large eggs should place more emphasis on egg size in his evaluation of stock than poultrymen located in areas where such premiums are not available. The local market preference for brown or white shells should also be taken into account. Traits related to interior egg quality that affect the grade are of greatest importance in areas where prices are based on quality standards.

Each person should study his local needs and conditions and then place appropriate emphasis on the performance traits that are of greatest importance to his situation. A productive and profitable stock for one poultryman under one set of conditions may not fit the needs of another poultryman under a different set of conditions.

A brief explanation of the statistical procedures used in computing the regressed means and confidence limits is provided on pages 21 through 28.

EXPLANATION OF TERMS AND ABBREVIATIONS

Stock: A term used to identify a specific breeding combination of chickens. These breeding combinations may include pure strains, strain crosses, breed crosses, incrossbreds, or combinations thereof. Kinds of stock are—

BA	Black Australorp	RIR	Rhode Island Red	BX	Crossbred
BPR	Barred Plymouth Rock	RIW	Rhode Island White	IN	Incross
CG	California Gray	WL	White Leghorn	INX	Incrossbred
LS	Light Susses	WPR	White Plymouth Rock	PS	Pure Strain
NH	New Hampshire	WW	White Wyandotte	SX	Strain Cross
				Syn	Synthetic

Tests:	Alta.	Alberta	N. S.	Nova Scotia
	B. C.	British Columbia	Ont.	Ontario
	C. C.	Central Canada	P. E. I.	Prince Edwards Island
	C. N. Y.	Central New York	Que.	Quebec
	Man.	Manitoba	Sask.	Saskatchewan
	N. B.	New Brunswick		

Test Year: The period beginning in spring of the year stated first in a double-year designation and ending approximately 500 days later. See Management Summary table, column 4, page 30.

DEFINITIONS OF TRAITS AND LISTING OF TESTS THAT DID NOT REPORT ALL TRAITS

<u>Trait</u>	<u>Definition</u>																								
Growing mortality	Percent mortality to 150 days or subsequent age at housing.																								
Laying mortality	Percent laying house mortality computed from 150 days or subsequent age at housing to end of test.																								
Age at 50-percent production.	Days of age to 50-percent production calculated from the first day of the first 2 consecutive days of 50-percent production for living birds in the entry at that time.																								
Hen-housed egg production.	Number of eggs per pullet housed calculated from date of housing until end of test.																								
Hen-day egg production.	Percent hen-day production from the time the birds reached 50-percent production to end of test.																								
Income over feed and chick cost.	Income over feed and chick cost per pullet housed, with chick cost in 1,000 lots at hatch date adjusted for mortality (accidental deaths, sexing errors, and missing chicks not included).																								
Feed per pound of eggs	Pounds of feed per pound of eggs produced, computed from bulk weighing of the eggs 1 day every 2 weeks or at least 2 days a month at equal intervals.																								
Egg weight	Average annual egg weight computed from bulk weighings at least 1 day every 2 weeks or 2 days a month at equal intervals.																								
Large and extra large eggs.	Percent large and extra large eggs as determined by egg-size distribution computed from all eggs laid 1 day each week.																								
Body weight	Average weight of remaining birds at end of test.																								
Albumen quality	Haugh units, calculated from egg weight and albumen height of broken out egg, measured on 1 day's eggs per quarter, at equal intervals. The greater the Haugh units the higher the albumen quality.																								
Large blood spots	Percentage of eggs with one or more large blood spots (1/8 inch or more in diameter), computed from at least 3 days' eggs per quarter, broken-out basis.																								
Small blood spots	Percentage of eggs with one or more small blood spots (less than 1/8 inch in diameter), computed from at least 3 days' eggs per quarter, broken-out basis.																								
Large meat spots	Percentage of eggs with one or more large colored meat spots (1/8 inch or more in diameter), computed from at least 3 days' eggs per quarter, broken-out basis.																								
Small meat spots	Percentage of eggs with one or more small colored meat spots (less than 1/8 inch in diameter), computed from at least 3 days' eggs per quarter, broken-out basis.																								
Specific gravity score	A score based on the specific gravity of the eggs measured. There is a close correlation between the specific gravity and shell thickness of an egg. Therefore, the higher the specific gravity score, the thicker the egg shell. (When an egg floats in one of the specific gravity solutions listed below, it is given the corresponding specific gravity score. If the egg does not float in the 1.100 solution, it is given a nine score.)																								
	<table><tr><th><u>Specific Gravity Solution</u></th><th><u>Specific Gravity Score</u></th><th><u>Specific Gravity Solution</u></th><th><u>Specific Gravity Score</u></th></tr><tr><td>1.068</td><td>0</td><td>1.088</td><td>5</td></tr><tr><td>1.072</td><td>1</td><td>1.092</td><td>6</td></tr><tr><td>1.076</td><td>2</td><td>1.096</td><td>7</td></tr><tr><td>1.080</td><td>3</td><td>1.100</td><td>8</td></tr><tr><td>1.084</td><td>4</td><td></td><td></td></tr></table>	<u>Specific Gravity Solution</u>	<u>Specific Gravity Score</u>	<u>Specific Gravity Solution</u>	<u>Specific Gravity Score</u>	1.068	0	1.088	5	1.072	1	1.092	6	1.076	2	1.096	7	1.080	3	1.100	8	1.084	4		
<u>Specific Gravity Solution</u>	<u>Specific Gravity Score</u>	<u>Specific Gravity Solution</u>	<u>Specific Gravity Score</u>																						
1.068	0	1.088	5																						
1.072	1	1.092	6																						
1.076	2	1.096	7																						
1.080	3	1.100	8																						
1.084	4																								

All tests, except Iowa, reported all 16 traits in both 1964-65 and 1965-66. The Income and Feed conversion data were not recorded at the Iowa locations for 1964-65 and in addition, the percent Large and extra large eggs was not reported in 1965-66.

STOCK CODE	BREEDER'S NAME AND ADDRESS	BREEDING	STRAIN OR TRADENAME	NO. PENS NO. LOCATIONS	AVG. CHICK PRICE (¢)	MORTALITY			
						GROWING (%)		LAYING (%)	
						RE- GRESSED MEAN	80%* CDNF. LIMITS	RE- GRESSED MEAN	80%* CDNF. LIMITS
578	Andrews, J. J. Chilliwack, B. C.	WL	SX	Andrews	6 2	34.0	3.0 3.1	7.2 8.7	10.3
599	Andrews, J. J. Chilliwack, B. C.	WL	SX	K. B. 83	4 2	34.0	2.9 3.1	9.3 10.9	12.6
145	Animal Research Institute Ottawa, Ont.	WL	PS	Random Bred	8 2	40.0	3.2 3.4	16.8 18.9	21.2
570	Animal Research Institute Kentville, N. S.	WL	PS	Kentville R. B. C.	16 4	38.3	3.0 3.2	8.8 10.5	12.2
10	Anthony, Geo. M. & Sons Strausstown, Pa.	WL	SX	Anthony	21 7	38.7	2.9 3.1	8.6 10.1	11.7
138	Arbor Acres Farm, Inc. Glastonbury, Conn.	WL	SX	Queen	46 25	34.1	3.2 3.5	13.8 15.3	17.0
307	Babcock Poultry Farm, Inc. Ithaca, N. Y.	WL	SX	Babcock B-300	65 25	38.3	3.1 3.3	7.9 9.0	10.3
376	Babcock Poultry Farm, Inc. Ithaca, N. Y.	WL	SX	Babcock B-310	7 5	36.8	3.1 3.3	7.9 9.5	11.2
377	Babcock Poultry Farm, Inc. Ithaca, N. Y.	RIRxBPR BX		Babcock B-390	6 5	37.0	2.9 3.0	8.4 10.0	11.7
20	Beamsdale Farm Lawndale, N. C.	WL	SX	Beamsdale 66	6 2	34.0	3.2 3.4	13.1 15.1	17.1
230	Brender's Leghorns Ferndale, N. Y.	WL	SX	Money Maker	18 8	30.0	3.0 3.2	8.6 10.1	11.7
361	Burling Hatchery Oxford, Pa.	RIRxWPR BX		Golden Tri-Cross	2 1	32.0	3.2 3.3	10.7 12.2	13.8
593	Burpee, Arthur K. Woodstock, N. B.	WL	SX	Burpee #43	4 1	31.0	3.2 3.4	10.0 11.6	13.4
283	Cameron Leghorn Res. Farm Beaver Springs, Pa.	WL	SX	Cameron #924	15 5	32.0	3.0 3.2	9.7 11.3	13.1
372	Carey Farms Marion, Ohio	WL	IN	New Nick	6 4	37.8	3.3 3.5	12.3 14.2	16.2
304	Cashman Leghorn Farm Webster, Ky.	Syn x WL INX		Astronauts	5 2	37.5	3.1 3.3	10.2 11.9	13.8
31	Cashman Leghorn Farm Webster, Ky.	WL	IN	Hi-Cash	24 9	37.8	3.3 3.5	13.2 15.0	16.8
508	Clark's Poultry Farm Brandon, Man.	RIRx (LSxRIR)		Paymaster 101	8 3	31.0	3.0 3.2	9.1 10.8	12.6
289	Colonial Poultry Farms Pleasant Hill, Mo.	WL	IN	True-Line 365B	34 17	37.8	2.9 3.2	11.7 13.2	14.8
330	Colonial Poultry Farms Pleasant Hill, Mo.	----	INX	True-Line #142	4 1	37.0	3.1 3.2	9.8 11.5	13.3

* If the confidence limits for two regressed means overlap, the two means are not significantly different at the 5% level.

AGE AT 50% PRODUCTION (Days)		EGG PRODUCTION				INCOME OVER FEED AND CHICK COST (¢)		FEED PER POUND OF EGGS PRODUCED (lbs.)		EGG WEIGHT (oz.)		LARGE AND EXTRA LARGE EGGS (%)		BODY WEIGHT (lbs.)		STOCK CODE
		HEN HOUSED		HEN DAY												
		(No.)		(%)												
RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	
180	176 184	223	215 231	70.1	68.5 71.7	2.14	1.99 2.29	2.84	2.75 2.93	24.8	24.5 25.1	67.7	65.1 70.3	4.5	4.3 4.7	578
177	173 181	217	210 224	69.1	67.5 70.7	2.02	1.87 2.17	2.90	2.80 3.00	24.2	23.8 24.6	56.3	53.5 59.1	4.5	4.2 4.8	599
189	185 193	186	179 193	63.8	62.2 65.4	1.39	1.23 1.55	3.32	3.23 3.41	24.0	23.6 24.4	53.3	50.6 56.0	4.6	4.3 4.9	145
178	175 181	214	207 221	67.7	66.2 69.2	1.89	1.74 2.04	2.97	2.89 3.05	24.8	24.5 25.1	65.2	63.0 67.4	4.4	4.2 4.6	570
181	178 184	216	210 222	69.2	67.8 70.6	1.99	1.85 2.13	2.94	2.87 3.01	25.0	24.7 25.3	69.4	67.6 71.2	4.5	4.3 4.7	10
183	181 185	208	202 214	69.3	68.1 70.5	1.84	1.70 1.98	2.97	2.91 3.03	24.8	24.6 25.0	68.3	66.8 69.8	4.4	4.2 4.6	138
168	166 170	232	226 238	71.7	70.6 72.8	2.28	2.14 2.42	2.79	2.73 2.85	25.2	24.9 25.5	71.0	69.5 72.5	4.4	4.2 4.6	307
177	174 180	212	205 219	67.1	65.6 68.6	1.96	1.81 2.11	2.96	2.87 3.05	25.6	25.2 26.0	73.9	71.5 76.3	4.3	4.1 4.5	376
176	172 180	217	210 224	68.2	66.7 69.7	1.99	1.84 2.14	3.15	3.06 3.24	26.0	25.6 26.4	78.7	76.2 81.2	6.0	5.7 6.3	377
179	175 183	205	198 212	67.8	66.3 69.3	1.81	1.66 1.96	3.04	2.95 3.13	24.6	24.3 24.9	65.6	63.0 68.2	4.2	4.0 4.4	20
184	181 187	209	203 215	67.2	65.8 68.6	1.97	1.83 2.11	2.96	2.89 3.03	25.4	25.1 25.7	74.0	72.1 75.9	4.5	4.3 4.7	230
178	174 182	209	202 216	67.8	66.3 69.3	1.94	1.79 2.09	3.15	3.06 3.24	25.5	25.1 25.9	74.5	71.3 77.7	5.5	5.2 5.8	361
180	176 184	219	212 226	70.8	69.2 72.4	2.18	2.03 2.33	2.89	2.79 2.99	25.3	25.0 25.6	74.0	70.9 77.1	4.9	4.6 5.2	593
181	178 184	217	211 223	70.5	69.1 71.9	2.01	1.86 2.16	3.02	2.95 3.09	25.2	24.9 25.5	72.0	70.0 74.0	4.6	4.4 4.8	283
176	172 180	211	204 218	68.5	67.0 70.0	1.86	1.70 2.02	3.06	2.97 3.15	24.8	24.5 25.1	68.3	65.8 70.8	4.7	4.4 5.0	372
180	176 184	214	207 221	69.2	67.6 70.8	1.91	1.76 2.06	2.98	2.89 3.07	25.4	25.1 25.7	71.4	68.6 74.2	5.1	4.8 5.4	304
180	177 183	209	203 215	70.2	68.9 71.5	1.89	1.75 2.03	2.96	2.89 3.03	25.0	24.7 25.3	69.0	67.2 70.8	4.6	4.4 4.8	31
178	174 182	218	211 225	69.4	67.9 70.9	2.08	1.92 2.24	3.09	3.01 3.17	25.3	25.0 25.6	71.5	69.1 73.9	5.7	5.5 5.9	508
172	169 175	214	208 220	68.3	67.0 69.6	1.90	1.76 2.04	2.93	2.87 2.99	24.4	24.2 24.6	61.9	60.4 63.4	4.4	4.2 4.6	289
171	167 175	219	211 227	69.0	67.4 70.6	2.04	1.89 2.19	2.94	2.84 3.04	24.5	24.2 24.8	64.2	61.2 67.2	4.5	4.2 4.8	33C

* If the confidence limits for two regressed means overlap, the two means are not significantly different at the 5% level.

STOCK CODE	BREEDER'S NAME AND ADDRESS	BREEDING		STRAIN OR TRADENAME	NO. PENS — NO. LOCATIONS	AVG. CHICK PRICE (¢)	MORTALITY			
							GROWING (%)		LAYING (%)	
							RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS
268	Colonial Poultry Farms Pleasant Hill, Mo.	WL	SX	Super Star	2 1	31.0	3.1 3.3	9.8 12.9		
380	Colonial Poultry Farms Pleasant Hill, Mo.	WL	SX	Master Mating	2 1	29.0	3.1 3.3	11.2 14.4		
309	Davis, Joe K., Hatchery Earl, N. C.	RIRxBPR	BX	Davis Combiner	18 8	34.0	3.0 3.2	9.4 12.7		
48	DeKalb Agricultural Assn. Sycamore, Ill.	----	INX	DeKalb 131	35 18	38.0	3.0 3.2	9.1 12.2		
277	DeKalb Agricultural Assn. Sycamore, Ill.	WL	SX	DeKalb 151	15 8	38.0	3.0 3.2	7.5 10.6		
371	Demler Farms, Inc. Anaheim, Calif.	WL	SX	Demler D-65	10 7	30.0	3.0 3.2	5.8 8.7		
514	deZeeuw Leghorn Breeder South Edmonton, Alberta	WL	SX	deZeeuw 752	10 4	35.0	3.0 3.2	7.3 10.4		
575	deZeeuw Leghorn Breeder South Edmonton, Alberta	WL	SX	deZeeuw 752A	2 1	34.0	3.0 3.1	10.5 13.6		
350	Erath Egg Farm Stephenville, Tex.	----	INX	Erath Mestiza	11 6	35.0	3.1 3.3	10.6 14.2		
518	Fisher Poultry Farm, Ltd. Ayton, Ont.	WL	SX	Fisher 103	14 5	35.7	3.1 3.3	12.3 16.1		
601	Fisher Poultry Farm, Ltd. Ayton, Ont.	RIRxWW	BX	Fisher 503	2 1	29.0	3.2 3.3	10.7 13.7		
368	Fox Den Farms Cary, N. C.	RIR	SX	Little Red Hen	4 1	35.0	3.2 3.4	9.2 12.5		
66	Garber Poultry Breeding Fm. Modesto, Calif.	WL	SX	Garber G 200	26 11	33.6	3.1 3.3	9.6 12.6		
65	Garber Poultry Breeding Fm. Modesto, Calif.	CGxWL	BX	Garber G x 291	13 5	30.0	3.0 3.3	8.2 11.4		
506	Gardiner, D. Cloverdale, B. C.	WLx (WLxBA)		Kanaka White	12 5	30.0	3.3 3.5	17.3 21.7		
69	Garrison, Earl W. Bridgeton, N. J.	RIRxWPR	BX	Golden Sex Link	9 5	32.0	3.2 3.4	8.2 11.5		
379	Garrison, Earl W. Bridgeton, N. J.	RIRxBPR	BX	Black Gold	1 1	31.0	3.2 3.3	10.9 13.5		
70	Gasson's Poultry Farm Versailles, Ohio	WL	SX	Gasson's G 33	8 2	42.0	3.0 3.2	7.5 10.8		
338	Ghostley's Poultry Farm, Inc. Anoka, Minn.	WL	SX	Ghostley Pearl 63	59 27	41.4	2.9 3.2	12.2 15.0		
373	Ghostley's Poultry Farm, Inc. Anoka, Minn.	WL	SX	Cage Queen	1 1	36.0	3.2 3.3	9.6 12.1		

* If the confidence limits for two regressed means overlap, the two means are not significantly different at the 5% level.

AGE AT 50% PRODUCTION (Days)		EGG PRODUCTION				INCOME OVER FEED AND CHICK COST (\$)		FEED PER POUND OF EGGS PRODUCED (lbs.)		EGG WEIGHT (oz.)		LARGE AND EXTRA LARGE EGGS (%)		BODY WEIGHT (lbs.)		STOCK CODE
		HEN HOUSED		HEN DAY												
		(No.)		(%)												
RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	
172	168 176	222	215 229	70.1	68.6 71.6	2.17	2.03 2.31	2.81	2.71 2.91	24.7	24.3 25.1	64.8	61.6 68.0	4.0	3.7 4.3	268
174	170 178	212	205 219	69.3	67.8 70.8	2.00	1.85 2.15	2.90	2.81 2.99	24.7	24.3 25.1	63.7	60.5 66.9	4.4	4.1 4.7	380
177	174 180	213	207 219	67.3	65.9 68.7	1.93	1.78 2.08	3.18	3.11 3.25	26.1	25.8 26.4	77.9	76.0 79.8	6.0	5.8 6.2	309
172	169 175	216	209 223	68.4	67.0 69.8	2.00	1.85 2.15	2.78	2.71 2.85	25.0	24.7 25.3	69.2	67.3 71.1	4.2	4.0 4.4	48
175	172 178	217	210 224	69.0	67.5 70.5	2.02	1.87 2.17	2.83	2.75 2.91	25.3	25.0 25.6	72.9	70.9 74.9	4.3	4.1 4.5	277
179	176 182	219	212 226	69.0	67.5 70.5	2.10	1.95 2.25	2.92	2.84 3.00	25.4	25.1 25.7	73.4	71.1 75.7	4.3	4.1 4.5	371
181	178 184	217	209 225	69.4	67.9 70.9	2.07	1.92 2.22	2.87	2.79 2.95	24.7	24.4 25.0	65.1	62.8 67.4	4.3	4.1 4.5	514
178	173 183	213	206 220	68.1	66.6 69.6	1.93	1.79 2.07	2.93	2.83 3.03	25.3	24.9 25.7	63.9	60.6 67.2	4.7	4.4 5.0	575
171	168 174	217	210 224	69.5	68.1 70.9	2.02	1.87 2.17	2.85	2.77 2.93	24.6	24.3 24.9	62.7	60.6 64.8	4.8	4.5 5.1	350
183	180 186	209	202 216	69.8	68.3 71.3	1.94	1.79 2.09	2.90	2.82 2.98	25.0	24.7 25.3	69.0	66.9 71.1	4.5	4.3 4.7	518
175	171 179	204	197 211	65.0	63.6 66.4	1.81	1.67 1.95	3.19	3.09 3.29	25.9	25.5 26.3	75.4	72.0 78.8	6.1	5.8 6.4	601
183	179 187	203	196 210	65.0	63.4 66.6	1.77	1.62 1.92	3.03	2.94 3.12	25.1	24.7 25.5	68.0	65.0 71.0	4.5	4.3 4.7	368
179	176 182	217	210 224	69.5	68.2 70.8	2.07	1.93 2.21	2.91	2.84 2.98	25.5	25.2 25.8	74.8	73.1 76.5	4.6	4.4 4.8	66
170	166 174	220	214 226	68.8	67.4 70.2	2.10	1.95 2.25	2.90	2.82 2.98	25.4	25.1 25.7	70.8	68.7 72.9	5.1	4.9 5.3	65
183	180 186	191	184 198	66.2	64.7 67.7	1.69	1.54 1.84	3.06	2.98 3.14	25.3	25.0 25.6	70.2	68.1 72.3	4.7	4.5 4.9	506
178	175 181	209	202 216	65.8	64.3 67.3	1.91	1.76 2.06	3.24	3.16 3.32	26.3	26.0 26.6	80.5	78.3 82.7	6.5	6.3 6.7	69
178	174 182	211	204 218	68.4	67.0 69.8	1.77	1.63 1.91	3.18	3.09 3.27	26.1	25.7 26.5	76.8	73.3 80.3	5.9	5.6 6.2	379
179	175 183	219	212 226	69.7	68.1 71.3	2.03	1.88 2.18	2.93	2.84 3.02	24.6	24.3 24.9	65.7	63.2 68.2	4.2	4.0 4.4	70
172	170 174	221	215 227	70.6	69.5 71.7	2.00	1.86 2.14	2.92	2.86 2.98	25.4	25.2 25.6	71.9	70.4 73.4	4.6	4.4 4.8	338
168	164 172	220	214 226	68.6	67.2 70.0	2.14	2.01 2.27	2.91	2.81 3.01	25.1	24.7 25.5	71.0	67.5 74.5	4.6	4.2 5.0	373

* If the confidence limits for two regressed means overlap, the two means are not significantly different at the 5% level.

STOCK CODE	BREEDER'S NAME AND ADDRESS	BREEDING	STRAIN OR TRADENAME	NO. PENS NO. LOCATIONS	AVG. CHICK PRICE (¢)	MORTALITY			
						GROWING (%)		LAYING (%)	
						RE-GRESSED MEAN	80%* CONF. LIMITS	RE-GRESSED MEAN	80%* CONF. LIMITS
80	Hansen's Leghorn City Puyallup, Wash.	WL SX	Criss Cross H 25	16 5	32.8	3.3	3.1 3.5	9.1	7.6 10.7
322	Hanson, J. A. & Son Corvallis, Oreg.	WL SX	Super Nick A	7 3	31.0	3.3	3.2 3.5	13.9	12.0 15.8
225	Harco Orchards & Poultry Fm. South Easton, Mass.	RIRxBPR BX	Sex Link	22 9	37.0	2.9	2.7 3.1	10.3	8.8 11.9
86	Hardy, C. Nelson & Son Essex, Mass.	RIRxBPR BX	Sex Link	7 4	34.0	3.3	3.1 3.4	11.8	10.1 13.7
383	Hardy Poultry Farm, Inc. Chester, N. H.	Breed Cross	Sex Link	3 3	32.0	3.3	3.2 3.4	11.7	10.0 13.4
88	Heisdorf & Nelson Farms Redmond, Wash.	WL SX	Nick Chick	49 19	38.0	3.3	3.0 3.5	9.7	8.4 11.0
316	Heisey Leghorn Farms Mount Joy, Pa.	WL SX	H-K-Cross	2 1	28.0	3.4	3.2 3.5	12.0	10.5 13.6
92	Honegger Breeder Hatchery Forrest, Ill.	WL SX	Honegger Layer	46 18	40.4	3.3	3.1 3.6	11.4	10.0 12.9
321	Honegger Breeder Hatchery Forrest, Ill.	Syn x WL BX	Honegger H-80	10 6	41.0	3.2	3.1 3.5	11.2	9.5 13.0
378	Hubbard Farms, Inc. Walpole, N. H.	Syn x NH BX	Golden Comet	6 5	35.0	3.2	3.0 3.3	9.9	8.3 11.6
96	Hy-Line Poultry Farm Des Moines, Iowa	---- INX	Hy-Line 934	18 12	46.6	3.1	2.9 3.3	8.1	6.7 9.7
360	Hy-Line Poultry Farm Des Moines, Iowa	---- INX	Hy-Line 934-D	61 24	48.2	3.2	3.0 3.5	9.1	7.9 10.3
340	Ideal Poultry Breeding Farm Cameron, Tex.	WL SX	Ideal H-3-W-2	32 16	38.0	3.6	3.3 3.8	12.0	10.5 13.6
356	Ideal Poultry Breeding Farm Cameron, Tex.	Syn x WL BX	Ideal 236	18 8	38.0	3.2	2.9 3.4	11.2	9.6 12.9
341	Kerr, Dr., Hatcheries, Inc. Minneota, Minn.	---- INX	Kerr P-K 26	4 2	44.0	3.3	3.2 3.5	10.6	9.0 12.3
110	Kimber Farms, Inc. Fremont, Calif.	WL SX	Kimber K 137	60 28	38.1	3.2	2.9 3.4	9.8	8.6 11.1
375	Kimber Farms, Inc. Fremont, Calif.	WL SX	Kimber K 137A	24 16	41.1	3.3	3.1 3.6	8.7	7.3 10.2
111	Kimber Farms, Inc. Fremont, Calif.	WL SX	Kimber K 141	11 6	39.0	3.1	2.9 3.3	8.2	6.7 9.7
227	Klongland Hatchery Stoughton, Wis.	CGxWL BX	K Cross	4 1	37.0	3.3	3.2 3.5	9.4	7.9 11.1
117	Lawton, A. C. & Sons Foxboro, Mass.	RIRxWPR BX	Buff Sex Link	18 8	34.0	3.2	2.9 3.4	8.2	6.8 9.6

* If the confidence limits for two regressed means overlap, the two means are not significantly different at the 5% level.

AGE AT 50% PRODUCTION (Days)		EGG PRODUCTION				INCOME OVER FEED AND CHICK COST (\$)		FEED PER POUND OF EGGS PRODUCED (lbs.)		EGG WEIGHT (oz.)		LARGE AND EXTRA LARGE EGGS (%)		BODY WEIGHT (lbs.)		STOCK CODE
		HEN HOUSED		HEN DAY												
		(No.)		(%)												
RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	
181	178 184	211	204 218	67.4	66.0 68.8	1.97	1.82 2.12	2.96	2.88 3.04	25.0	24.7 25.3	70.2	68.2 72.2	4.7	4.5 4.9	80
177	174 180	206	199 213	67.2	65.7 68.7	1.76	1.61 1.91	3.03	2.95 3.11	24.2	23.9 24.5	57.4	54.9 59.9	4.3	4.1 4.5	322
175	173 177	222	215 229	70.3	68.9 71.7	2.20	2.05 2.35	3.07	3.00 3.14	26.8	26.6 27.0	84.2	82.5 85.9	6.0	5.8 6.2	225
181	177 185	202	195 209	65.2	63.7 66.7	1.80	1.65 1.95	3.26	3.17 3.35	26.2	25.9 26.5	80.3	77.9 82.7	6.2	6.0 6.4	86
176	172 180	211	203 219	67.1	65.6 68.6	1.95	1.80 2.10	3.09	3.00 3.18	26.5	26.1 26.9	81.5	78.6 84.4	5.9	5.7 6.1	383
175	173 177	217	211 223	68.3	67.0 69.6	2.04	1.90 2.18	2.93	2.87 2.99	25.1	24.8 25.4	68.9	67.2 70.6	4.4	4.2 4.6	88
183	179 187	205	198 212	67.0	65.5 68.5	1.79	1.65 1.93	3.04	2.94 3.14	25.5	25.1 25.9	72.6	69.4 75.8	4.5	4.2 4.8	316
175	173 177	220	214 226	70.2	69.0 71.4	2.04	1.90 2.18	2.89	2.83 2.95	25.0	24.7 25.3	68.2	66.7 69.7	4.4	4.3 4.5	92
173	169 177	222	215 229	70.6	69.1 72.1	1.94	1.79 2.09	2.91	2.83 2.99	24.9	24.6 25.2	66.4	64.2 68.6	5.1	4.9 5.3	321
171	168 174	219	212 226	68.0	66.5 69.5	2.12	1.97 2.27	2.94	2.86 3.02	26.5	26.2 26.8	80.2	77.7 82.7	5.3	5.1 5.5	378
174	171 177	223	216 230	70.6	69.1 72.1	2.17	2.02 2.32	2.79	2.71 2.87	25.9	25.6 26.2	77.1	74.9 79.3	4.2	4.0 4.4	96
176	173 179	222	216 228	69.9	68.8 71.0	2.07	1.93 2.21	2.82	2.76 2.88	25.5	25.3 25.7	73.9	72.4 75.4	4.0	3.9 4.1	360
181	178 184	207	201 213	67.3	65.9 68.7	1.88	1.73 2.03	2.97	2.90 3.04	25.1	24.9 25.3	71.2	69.3 73.1	4.3	4.1 4.5	340
175	172 178	219	213 225	69.9	68.5 71.3	2.07	1.92 2.22	2.90	2.82 2.98	25.1	24.8 25.4	69.2	67.4 71.0	4.6	4.4 4.8	356
175	171 179	217	209 225	68.5	67.0 70.0	1.97	1.81 2.13	2.97	2.88 3.06	25.3	25.0 25.6	72.6	69.9 75.3	4.9	4.6 5.2	341
174	171 177	219	213 225	69.0	67.8 70.2	2.08	1.94 2.22	2.86	2.79 2.93	25.0	24.7 25.3	69.7	68.2 71.2	4.3	4.2 4.4	110
173	170 176	221	215 227	69.4	68.0 70.8	2.17	2.01 2.33	2.86	2.78 2.94	25.0	24.7 25.3	70.1	68.1 72.1	4.4	4.2 4.6	375
175	172 178	221	214 228	68.8	67.4 70.2	2.15	2.00 2.30	2.83	2.75 2.91	25.2	24.9 25.5	71.0	68.9 73.1	4.5	4.3 4.7	111
175	171 179	217	210 224	67.6	66.1 69.1	2.01	1.86 2.16	2.95	2.85 3.05	25.2	24.9 25.5	70.5	67.5 73.5	5.1	4.8 5.4	227
182	179 185	209	203 215	66.1	64.7 67.5	1.91	1.76 2.06	3.25	3.18 3.32	26.9	26.6 27.2	84.0	82.2 85.8	6.0	5.8 6.2	117

* If the confidence limits for two regressed means overlap, the two means are not significantly different at the 5% level.

STOCK CODE	BREEDER'S NAME AND ADDRESS	BREEDING	STRAIN OR TRADENAME	NO. PENS	NO. LOCATIONS	AVG. CHICK PRICE (¢)	MORTALITY			
							GROWING (%)		LAYING (%)	
							RE-GRESSED MEAN	80%* CONF. LIMITS	RE-GRESSED MEAN	80%* CONF. LIMITS
576	Manitoba Dairy & Plty. Coop. Winnipeg, Man.	WL	SX	Keyline 110 C	14			3.1		11.7
					5	36.0	3.4	3.6	13.5	15.4
598	Nelson, George F. Truro, N. S.	RIR(LSxRIR)	Sex Link		6			3.1		11.3
		BX			2	28.0	3.3	3.5	13.1	15.1
526	Noble Bros. Orangeville, Ont.	WL	SX	Noble N-60	6			3.0		10.4
					2	33.0	3.2	3.3	12.2	14.1
37	N. Cent. Reg. Plty. Br. Lab. Lafayette, Ind.	WL	PS	Reg. Cornell Contr.	26			3.3		11.7
					9	42.0	3.5	3.8	13.3	15.0
352	Parks Poultry Farm Altoona, Pa.	WL	SX	Keystone B-1	10			3.1		10.3
					4	35.0	3.3	3.5	12.0	13.9
359	Parks Poultry Farm Altoona, Pa.	WL	SX	Keystone K-1700	2			3.2		8.6
					1	30.0	3.3	3.4	10.0	11.5
382	Parks Poultry Farm Altoona, Pa.	----	BX	Sil-Go-Links	5			3.0		7.3
					4	35.0	3.2	3.4	8.8	10.4
152	Pa.-Ind. Farm Bureau Grantville, Pa.	WL	SX	Princess 55	13			3.3		11.3
					4	40.0	3.5	3.7	13.1	15.0
234	Pa.-Ind. Farm Bureau Grantville, Pa.	WL	SX	Dutchess 60	9			3.0		10.8
					5	43.8	3.2	3.4	12.6	14.5
160	Rapp Leghorn Farm, Inc. Farmingdale, N. J.	WL	SX	Rapp Linecross	3			3.0		8.2
					2	36.0	3.2	3.3	9.7	11.3
374	Schuyler Poultry Farms LeRoy, N. Y.	WL	SX	"65" Egg Champs	1			3.3		9.6
					1	39.0	3.4	3.5	10.8	12.1
181	Shaver Poultry Breeding Fm. Galt, Ont.	WL	SX	Starcross 288	64			3.1		10.2
					21	38.0	3.4	3.6	11.5	12.9
315	Shaver Poultry Breeding Fm. Galt, Ont.	WL	SX	Starcross 292	11			3.0		10.8
					5	37.0	3.3	3.5	12.6	14.5
333	Shaver Poultry Breeding Fm. Galt, Ont.	RIR	SX	Starcross 555	2			3.2		10.8
					1	36.0	3.3	3.4	12.3	13.8
566	St. Augustin Coop. Hatchery St. Augustin, Que.	WL	SX	Corvette A1	8			3.0		11.9
					3	38.0	3.2	3.4	13.7	15.7
533	Starline Breeders Hatchery Saskatoon, Sask.	CGxWL	BX	Pearlette	18			3.0		9.7
					6	37.0	3.2	3.5	11.4	13.1
186	Stever Hatchery Huntingdon, Pa.	WL	SX	Stever SC-300	10			3.0		10.5
					4	33.8	3.2	3.4	12.3	14.2
190	Stone's Poultry Farm Dinuba, Calif.	WL	SX	Stone's H 56	33			2.7		7.1
					15	36.5	2.9	3.2	8.4	9.7
336	Sturtevant Farms, Inc. Halifax, Mass.	RIRxBPR		Black Sex Link	7			3.0		8.6
		BX			4	32.0	3.2	3.4	10.2	12.0
384	Sturtevant Farms, Inc. Halifax, Mass.	RIRxWPR		Goldies	3			3.1		7.5
		BX			3	32.0	3.3	3.4	9.0	10.5

* If the confidence limits for two regressed means overlap, the two means are not significantly different at the 5% level.

AGE AT 50% PRODUCTION (Days)		EGG PRODUCTION				INCOME OVER FEED AND CHICK COST (%)		FEED PER POUND OF EGGS PRODUCED (lbs.)		EGG WEIGHT (oz.)		LARGE AND EXTRA LARGE EGGS (%)		BODY WEIGHT (lbs.)		STOCK CODE
		HEN HOUSED (No.)		HEN DAY (%)												
RE- GRESSSED MEAN	80%* CONF. LIMITS	RE- GRESSSED MEAN	80%* CONF. LIMITS	RE- GRESSSED MEAN	80%* CONF. LIMITS	RE- GRESSSED MEAN	80%* CONF. LIMITS	RE- GRESSSED MEAN	80%* CONF. LIMITS	RE- GRESSSED MEAN	80%* CONF. LIMITS	RE- GRESSSED MEAN	80%* CONF. LIMITS	RE- GRESSSED MEAN	80%* CONF. LIMITS	
177	174 180	203	197 209	66.2	64.7 67.7	1.78	1.63 1.93	3.03	2.95 3.11	25.0	24.7 25.3	66.7	64.6 68.8	4.7	4.5 4.9	57.
177	173 181	209	202 216	67.1	65.5 68.7	1.91	1.76 2.06	3.11	3.02 3.20	25.4	25.0 25.8	71.8	69.1 74.5	5.3	5.1 5.5	593
176	172 180	217	210 224	69.0	67.4 70.6	2.00	1.84 2.16	2.97	2.88 3.06	24.6	24.2 25.0	61.4	58.7 64.1	4.9	4.6 5.2	526
183	180 186	201	195 207	65.6	64.3 66.9	1.49	1.35 1.63	3.24	3.17 3.31	24.0	23.7 24.3	56.2	54.5 57.9	4.5	4.4 4.6	37
176	172 180	214	207 221	68.5	67.0 70.0	1.98	1.83 2.13	2.97	2.89 3.05	25.3	25.0 25.6	71.9	69.7 74.1	4.5	4.3 4.7	352
183	179 187	216	209 223	69.2	67.7 70.7	2.06	1.91 2.21	2.92	2.82 3.02	25.6	25.2 26.0	72.2	69.0 75.4	4.3	4.0 4.6	359
180	176 184	214	207 221	66.5	64.9 68.1	1.99	1.83 2.15	3.08	2.99 3.17	26.0	25.6 26.4	79.7	77.1 82.3	5.7	5.5 5.9	382
180	177 183	209	202 216	68.1	66.7 69.5	1.89	1.74 2.04	2.97	2.89 3.05	24.7	24.4 25.0	66.6	64.5 68.7	4.4	4.2 4.6	152
180	177 183	215	208 222	70.8	69.3 72.3	2.01	1.86 2.16	2.88	2.80 2.96	25.1	24.8 25.4	70.0	67.8 72.2	4.5	4.3 4.7	234
181	177 185	213	205 221	68.1	66.5 69.7	2.00	1.85 2.15	2.98	2.88 3.08	25.6	25.2 26.0	78.1	75.2 81.0	4.3	4.1 4.5	160
185	181 189	210	203 217	68.1	66.7 69.5	1.91	1.78 2.04	2.99	2.89 3.09	25.0	24.6 25.4	66.0	62.6 69.4	4.3	3.9 4.7	374
174	172 176	229	224 234	73.5	72.3 74.7	2.30	2.16 2.44	2.81	2.75 2.87	25.6	25.3 25.9	75.1	73.6 76.6	4.6	4.4 4.8	181
177	173 181	205	198 212	66.7	65.2 68.2	1.77	1.62 1.92	3.12	3.04 3.20	25.5	25.2 25.8	74.3	72.2 76.4	4.7	4.5 4.9	315
181	177 185	201	194 208	65.5	64.0 67.0	1.75	1.61 1.89	3.17	3.07 3.27	25.3	24.9 25.7	71.2	67.9 74.5	5.6	5.3 5.9	333
182	179 185	206	199 213	67.4	65.9 68.9	1.87	1.72 2.02	2.98	2.89 3.07	25.1	24.8 25.4	69.2	66.8 71.6	4.8	4.6 5.0	566
178	175 181	208	201 215	66.8	65.4 68.2	1.79	1.64 1.94	3.11	3.03 3.19	25.0	24.7 25.3	66.2	64.2 68.2	5.3	5.1 5.5	533
185	181 189	211	204 218	68.3	66.8 69.8	1.89	1.73 2.05	3.01	2.92 3.10	24.6	24.3 24.9	64.8	62.6 67.0	4.1	3.9 4.3	186
171	169 173	226	220 232	70.2	69.0 71.4	2.17	2.02 2.32	2.88	2.80 2.96	24.7	24.5 24.9	64.4	62.5 66.3	4.5	4.3 4.7	190
180	176 184	213	206 220	68.1	66.6 69.6	2.07	1.92 2.22	3.11	3.02 3.20	26.3	26.0 26.6	81.4	79.1 83.7	6.0	5.8 6.2	336
180	176 184	213	206 220	67.4	65.9 68.9	1.99	1.83 2.15	3.09	2.99 3.19	26.5	26.1 26.9	80.7	77.9 83.5	5.8	5.5 6.1	384

* If the confidence limits for two regressed means overlap, the two means are not significantly different at the 5% level.

STOCK CODE	BREEDER'S NAME AND ADDRESS	BREEDING	STRAIN OR TRADENAME	NO. PENS — NO. LOCATIONS	AVG. CHICK PRICE (¢)	MORTALITY			
						GROWING (%)		LAYING (%)	
						RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS
196	Sunnyside Hatchery Watertown, Wis.	CGxWL BX	Wisco White	4 1	35.0	3.2	3.1 3.4	13.7	11.9 15.5
381	Sykes, F & G Ltd. Warminster, England	WLxRIR BX	Hybrid 3	6 3	46.0	3.3	3.1 3.4	13.8	11.9 15.8
199	Townline Poultry Farm Zeeland, Mich.	WL SX	Townline SC 30	7 3	35.0	3.4	3.2 3.6	12.1	10.4 14.0
556	Triska, Eric Edmonton, Alta.	WL SX	Belmont 292	8 3	34.5	3.2	3.1 3.4	10.5	8.8 12.2
534	Triska, Eric Edmonton, Alta.	WL SX	Belmont 292 A	6 2	33.0	3.3	3.1 3.5	11.7	10.0 13.6
325	University of Tennessee Knoxville, Tenn.	WL PS	Pure Line	4 1	38.0	3.3	3.1 3.4	13.0	11.2 14.8
305	Warren, J. J., Inc. North Brookfield, Mass.	RIRxRIW BX	Sex-Sal-Link-F	24 10	40.3	3.2	2.9 3.4	7.1	5.8 8.4
349	Webster Poultry Farm Auburn, N. Y.	RIR SX	New Red	3 1	38.0	3.3	3.1 3.4	13.4	11.7 15.3
386	Welp's Breeding Farm Bancroft, Iowa	WL SX	Welp Line 910	8 4	----	3.2	3.0 3.3	8.0	6.5 9.6
290	Welp's Breeding Farm Bancroft, Iowa	WL SX	Welp Line 937	46 21	38.9	3.4	3.1 3.7	9.4	8.2 10.7

* If the confidence limits for two regressed means overlap, the two means are not significantly different at the 5% level.

AGE AT 50% PRODUCTION (Days)		EGG PRODUCTION				INCOME OVER FEED AND CHICK COST ($\$$)		FEED PER POUND OF EGGS PRODUCED (lbs.)		EGG WEIGHT (oz.)		LARGE AND EXTRA LARGE EGGS (%)		BODY WEIGHT (lbs.)		STOCK CODE
		HEN HOUSED (No.)		HEN DAY (%)												
RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	RE- GRESSED MEAN	80%* CONF. LIMITS	
173	169 177	208	201 215	69.2	67.6 70.8	1.85	1.70 2.00	2.97	2.87 3.07	24.5	24.1 24.9	61.5	58.5 64.5	5.1	4.8 5.4	196
171	168 174	217	210 224	71.0	69.4 72.6	2.01	1.85 2.17	2.91	2.82 3.00	25.1	24.7 25.5	68.8	66.3 71.3	5.3	5.1 5.5	381
177	173 181	214	207 221	68.6	67.0 70.2	1.96	1.81 2.11	2.98	2.89 3.07	25.1	24.8 25.4	71.0	68.6 73.4	4.5	4.2 4.8	199
181	177 185	215	207 223	68.5	67.0 70.0	2.03	1.88 2.18	2.96	2.87 3.05	25.4	25.1 25.7	74.2	71.7 76.7	4.6	4.3 4.9	556
179	175 183	210	202 218	67.8	66.3 69.3	1.92	1.77 2.07	2.92	2.83 3.01	25.0	24.7 25.3	66.8	64.2 69.4	4.3	4.1 4.5	534
178	174 182	194	187 201	62.5	60.9 64.1	1.43	1.28 1.58	3.32	3.23 3.41	24.4	24.1 24.7	64.8	61.8 67.8	4.7	4.4 5.0	325
180	177 183	216	209 223	67.6	66.3 68.9	2.18	2.03 2.33	3.04	2.97 3.11	26.1	25.8 26.4	80.0	78.3 81.7	5.6	5.4 5.8	305
179	175 183	209	201 217	67.9	66.4 69.4	1.86	1.71 2.01	3.10	3.00 3.20	25.0	24.7 25.3	68.2	65.1 71.3	5.6	5.3 5.9	349
171	167 175	223	216 230	69.0	67.5 70.5	----	----	----	----	25.0	24.7 25.3	----	---	4.1	3.8 4.4	386
177	174 180	219	213 225	69.5	68.3 70.7	2.10	1.96 2.24	2.84	2.78 2.90	24.9	24.7 25.1	68.7	67.1 70.3	4.0	3.8 4.2	290

* If the confidence limits for two regressed means overlap, the two means are not significantly different at the 5% level.

STOCK CODE	STRAIN OR TRADENAME	ALBUMEN QUALITY		BLOOD SPOTS				MEAT SPOTS				SPECIFIC GRAVITY SCORE	
				1/8 INCH OR MORE		LESS THAN 1/8 INCH		1/8 INCH OR MORE		LESS THAN 1/8 INCH			
		(Haugh units)		(%)		(%)		(%)		(%)			
		RE-GRESSED MEAN	80%* CONF. LIMITS	RE-GRESSED MEAN	80%* CONF. LIMITS	RE-GRESSED MEAN	80%* CONF. LIMITS	RE-GRESSED MEAN	80%* CONF. LIMITS	RE-GRESSED MEAN	80%* CONF. LIMITS	RE-GRESSED MEAN	80%* CONF. LIMITS
578	Andrews	78.2 79.3	80.4	0.9 1.1	1.3	1.7 1.9	2.2	0.0 .2	.6	0.3 .9	1.9	4.68 4.85	5.02
599	K. B. 83	74.3 75.6	76.9	1.1 1.3	1.6	1.9 2.1	2.3	.2 .6	1.2	.2 .7	1.7	4.41 4.60	4.79
145	Random Bred	77.7 78.9	80.1	1.1 1.3	1.6	2.0 2.2	2.5	0.0 0.0	.3	0.0 .3	1.0	3.94 4.26	
570	Kentville R. B. C.	75.8 76.8	77.8	1.2 1.5	1.8	2.0 2.3	2.6	0.0 .1	.3	0.0 .2	.7	4.15 4.27	4.39
10	Anthony	79.3 80.2	81.1	.8 1.0	1.3	1.6 1.8	2.1	0.0 .1	.3	.2 .5	.9	3.64 3.75	3.86
138	Queen	77.8 78.6	79.4	1.3 1.5	1.8	2.1 2.3	2.7	0.0 .1	.2	.2 .5	.8	4.18 4.27	4.36
307	Babcock B-300	75.2 76.0	76.8	1.1 1.3	1.6	1.5 1.8	2.0	.1 .2	.3	.5 .7	1.1	4.19 4.26	4.33
376	Babcock B-310	72.8 73.9	75.0	.7 .9	1.2	1.3 1.5	1.8	0.0 .2	.4	.4 .9	1.7	4.23 4.38	4.53
377	Babcock B-390	77.0 78.2	79.4	1.2 1.5	1.7	2.3 2.6	3.0	4.7 6.0	7.3	17.1 19.9	22.9	3.51 3.68	3.85
20	Beamsdale 66	77.3 78.5	79.7	1.0 1.2	1.4	1.7 1.9	2.1	0.0 .1	.5	.1 .5	1.2	4.29 4.46	4.63
230	Money Maker	76.8 77.7	78.6	.7 .9	1.2	1.8 2.1	2.4	0.0 .1	.3	.4 .8	1.3	4.43 4.54	4.65
361	Golden Tri-Cross	76.6 78.0	79.4	1.1 1.3	1.4	2.0 2.2	2.4	.7 1.5	2.6	8.4 11.7	15.4	3.69 3.90	4.11
593	Burpee #43	78.6 79.9	81.2	1.0 1.2	1.4	2.0 2.2	2.4	0.0 .1	.5	.4 1.3	2.8	4.11 4.30	4.49
283	Cameron #924	77.5 78.5	79.5	.9 1.1	1.4	1.7 2.0	2.3	.2 .4	.8	.3 .6	1.2	4.11 4.23	4.35
372	New Nick	74.8 76.0	77.2	.9 1.1	1.3	1.5 1.8	2.0	0.0 .1	.4	.9 1.8	2.9	4.29 4.45	4.61
304	Astronauts	74.7 75.9	77.1	.9 1.1	1.3	1.8 2.0	2.3	0.0 .2	.5	.4 1.2	2.4	3.77 3.95	4.13
31	Hi-Cash	76.1 76.9	77.7	1.2 1.4	1.7	1.8 2.1	2.5	.1 .2	.4	.4 .8	1.3	4.22 4.32	4.42
508	Paymaster 101	74.7 75.8	76.9	1.2 1.5	1.8	2.2 2.5	2.8	3.8 5.0	6.3	9.5 11.8	14.3	3.58 3.74	3.90
289	True-Line 365B	76.8 77.6	78.4	1.3 1.6	1.9	1.9 2.2	2.6	.1 .2	.4	.6 1.0	1.4	4.35 4.45	4.55
330	True-Line #142	76.0 77.3	78.6	1.0 1.2	1.4	1.7 1.9	2.1	0.0 .3	.8	.4 1.2	2.6	4.24 4.43	4.62

* If the confidence limits for two regressed means overlap, the two means are not significantly different at the 5% level.

STOCK CODE	STRAIN OR TRADENAME	ALBUMEN QUALITY		BLOOD SPOTS				MEAT SPOTS				SPECIFIC GRAVITY SCORE	
				1/8 INCH OR MORE		LESS THAN 1/8 INCH		1/8 INCH OR MORE		LESS THAN 1/8 INCH			
		(Haugh units)		1/8 INCH OR MORE (%)		LESS THAN 1/8 INCH (%)		1/8 INCH OR MORE (%)		LESS THAN 1/8 INCH (%)			
RE-GRESSED MEAN	80%* CONF. LIMITS	RE-GRESSED MEAN	80%* CONF. LIMITS	RE-GRESSED MEAN	80%* CONF. LIMITS	RE-GRESSED MEAN	80%* CONF. LIMITS	RE-GRESSED MEAN	80%* CONF. LIMITS	RE-GRESSED MEAN	80%* CONF. LIMITS		
268	Super Star	76.2	74.7 77.7	1.3	1.2 1.5	2.2	2.0 2.4	.1	0.0 .6	1.4	0.4 3.0	4.70	4.49 4.91
380	Master Mating	78.0	76.5 79.5	1.2	1.0 1.4	2.0	1.8 2.2	.6	.2 1.4	.8	.1 2.1	4.27	4.06 4.48
309	Davis Combiner	76.6	75.7 77.5	.8	.6 1.0	2.1	1.8 2.4	6.0	5.1 6.9	22.4	20.2 24.7	3.59	3.47 3.71
48	DeKalb 131	76.3	75.3 77.3	.9	.7 1.2	1.9	1.6 2.2	.2	.1 .3	.7	.3 1.2	4.07	3.97 4.17
277	DeKalb 151	77.1	76.1 78.1	1.0	.8 1.3	2.0	1.8 2.4	.1	0.0 .3	.5	.2 .9	4.04	3.92 4.16
371	Demler D-65	77.7	76.6 78.8	.8	.6 1.0	1.5	1.3 1.8	.2	0.0 .4	.7	.3 1.3	4.18	4.04 4.32
514	deZeeuw 752	77.2	76.1 78.3	1.4	1.1 1.7	2.1	1.8 2.4	.1	0.0 .4	1.6	.9 2.6	4.49	4.35 4.63
575	deZeeuw 752A	77.7	76.3 79.1	1.2	1.0 1.4	2.0	1.8 2.1	.4	.1 1.0	1.1	.2 2.6	4.14	3.93 4.35
350	Erath Mestiza	75.0	73.9 76.1	1.7	1.4 2.0	2.4	2.1 2.8	.2	.1 .5	.6	.2 1.1	3.94	3.81 4.07
518	Fisher 103	76.6	75.6 77.6	1.8	1.5 2.2	2.5	2.1 2.8	.1	0.0 .4	.4	.1 .9	4.36	4.23 4.49
601	Fisher 503	75.7	74.2 77.2	1.2	1.0 1.4	2.1	1.9 2.2	5.3	3.7 7.2	14.4	10.6 18.7	4.05	3.84 4.26
368	Little Red Hen	76.7	75.4 78.0	1.0	.8 1.2	1.8	1.6 2.0	4.9	3.5 6.6	29.7	25.2 34.4	3.55	3.36 3.74
66	Garber G 200	80.7	79.8 81.6	1.0	.8 1.3	1.5	1.3 1.8	.2	0.0 .3	.9	.5 1.4	4.76	4.66 4.86
65	Garber G x 291	76.5	75.5 77.5	.8	.6 1.0	1.8	1.6 2.1	.4	.1 .7	1.0	.5 1.7	4.10	3.97 4.23
506	Kanaka White	74.9	73.9 75.9	.9	.7 1.2	1.8	1.5 2.1	.8	.4 1.3	2.8	1.8 3.9	4.67	4.53 4.81
69	Golden Sex Link	79.0	78.0 80.0	1.3	1.1 1.6	2.7	2.3 3.0	5.2	4.2 6.4	24.0	21.3 26.8	4.56	4.41 4.71
379	Black Gold	77.7	76.2 79.2	1.1	1.0 1.3	2.1	1.9 2.2	3.2	1.9 4.8	7.8	4.8 11.4	3.93	3.71 4.15
70	Gasson G 33	78.6	77.5 79.7	1.2	.9 1.4	2.0	1.7 2.2	.1	0.0 .3	.5	.1 1.3	4.52	4.37 4.67
338	Ghostley Pearl 63	81.5	80.7 82.3	1.2	1.0 1.5	2.0	1.7 2.2	.1	0.0 .1	.4	.2 .7	4.22	4.15 4.29
373	Cage Queen	80.2	78.6 81.8	1.1	1.0 1.3	2.1	1.9 2.2	.6	.2 1.4	2.0	.7 4.1	4.06	3.84 4.28

*If the confidence limits for two regressed means overlap, the two means are not significantly different at the 5% level.

STOCK CODE	STRAIN OR TRADENAME	ALBUMEN QUALITY		BLOOD SPOTS				MEAT SPOTS				SPECIFIC GRAVITY SCORE	
				1/8 INCH OR MORE		LESS THAN 1/8 INCH		1/8 INCH OR MORE		LESS THAN 1/8 INCH			
		(Haugb units)		(%)		(%)		(%)		(%)			
RE-GRESSED MEAN	80%* CONF. LIMITS	RE-GRESSED MEAN	80%* CONF. LIMITS	RE-GRESSED MEAN	80%* CONF. LIMITS	RE-GRESSED MEAN	80%* CONF. LIMITS	RE-GRESSED MEAN	80%* CONF. LIMITS	RE-GRESSED MEAN	80%* CONF. LIMITS	RE-GRESSED MEAN	80%* CONF. LIMITS
80	Criss Cross H 25	77.7	76.8 78.6	1.4	1.2 1.8	2.2	1.9 2.5	.3	0.1 .5	1.7	1.0 2.5	4.57	4.45 4.69
322	Super Nick A	79.2	78.1 80.3	1.4	1.1 1.6	2.2	1.9 2.5	.1	0.0 .4	.6	.2 1.4	3.71	3.55 3.87
225	Sex Link	77.6	76.7 78.5	1.2	.9 1.4	2.7	2.4 3.1	5.9	5.0 6.8	19.2	17.2 21.2	3.28	3.17 3.39
86	Sex Link	76.4	75.3 77.5	1.6	1.4 1.9	2.9	2.6 3.3	4.7	3.6 5.9	28.0	24.9 31.3	4.30	4.14 4.46
383	Sex Link	78.3	77.0 79.6	1.4	1.1 1.6	2.5	2.2 2.7	3.8	2.7 5.2	33.8	29.6 38.1	3.79	3.60 3.98
88	Nick Chick	79.6	78.7 80.5	1.4	1.1 1.7	1.9	1.6 2.2	.2	.1 .3	.6	.3 .9	4.30	4.21 4.39
316	H-K-Cross	77.5	76.1 78.9	1.0	.9 1.2	2.0	1.9 2.2	.5	.1 1.2	1.7	.6 3.4	4.28	4.07 4.49
92	Honegger Layer	77.6	76.9 78.3	1.1	.8 1.3	1.8	1.5 2.1	.1	0.0 .1	.6	.3 .9	4.45	4.36 4.54
321	Honegger H-80	74.0	72.9 75.1	1.1	.9 1.4	2.1	1.8 2.4	.3	.1 .6	.1	0.0 .5	3.95	3.81 4.09
378	Golden Comet	79.0	77.8 80.2	.8	.6 1.1	1.9	1.7 2.2	5.1	4.0 6.4	26.5	23.3 29.8	3.65	3.49 3.81
96	Hy-Line 934	73.9	72.9 74.9	.6	.5 .8	2.0	1.7 2.3	0.0	0.0 .1	.7	.3 1.2	4.39	4.27 4.51
360	Hy-Line 934-D	74.9	74.1 75.7	.6	.4 .8	1.4	1.2 1.6	0.0	0.0 .1	.2	.1 .4	4.37	4.30 4.44
340	Ideal H-3-W-2	77.3	76.3 78.3	1.3	1.1 1.6	1.6	1.4 1.9	0.0	0.0 .1	.4	.2 .8	4.63	4.53 4.73
356	Ideal 236	75.5	74.6 76.4	1.2	.9 1.5	1.3	1.1 1.6	.1	0.0 .2	.5	.2 .9	4.31	4.19 4.43
341	Kerr P-K 26	78.2	76.9 79.5	1.3	1.0 1.5	2.4	2.2 2.7	.1	0.0 .4	.6	.1 1.4	4.18	4.00 4.36
110	Kimber K 137	82.1	81.3 82.9	.9	.8 1.2	1.6	1.4 1.9	.1	.1 .2	.9	.6 1.3	4.94	4.86 5.02
375	Kimber K 137 A	81.7	80.7 82.7	.9	.7 1.1	1.5	1.3 1.8	.3	.2 .5	1.8	1.2 2.5	4.69	4.58 4.80
111	Kimber K 141	77.8	76.8 78.8	1.2	1.0 1.5	2.1	1.8 2.5	.1	0.0 .3	.9	.4 1.5	4.87	4.74 5.00
227	K Cross	76.6	75.3 77.9	1.1	.9 1.3	1.9	1.7 2.1	.2	0.0 .7	.8	.1 1.9	3.93	3.74 4.12
117	Buff Sex Link	76.7	75.8 77.6	1.1	.9 1.4	3.1	2.7 3.4	7.5	6.5 8.6	22.5	20.3 24.7	4.05	3.93 4.17

* If the confidence limits for two regressed means overlap, the two means are not significantly different at the 5% level.

STOCK CODE	STRAIN OR TRADENAME	ALBUMEN QUALITY		BLOOD SPOTS				MEAT SPOTS				SPECIFIC GRAVITY SCORE	
				1/8 INCH OR MORE		LESS THAN 1/8 INCH		1/8 INCH OR MORE		LESS THAN 1/8 INCH			
		(Haugh units)		(%)		(%)		(%)		(%)			
RE-GRESSEO MEAN	80%* CONF. LIMITS	RE-GRESSEO MEAN	80%* CONF. LIMITS	RE-GRESSEO MEAN	80%* CONF. LIMITS	RE-GRESSEO MEAN	80%* CONF. LIMITS	RE-GRESSEO MEAN	80%* CONF. LIMITS	RE-GRESSEO MEAN	80%* CONF. LIMITS	RE-GRESSEO MEAN	80%* CONF. LIMITS
576	Keyline 110 C	80.1	79.1 81.1	1.4	1.1 1.7	2.0	1.8 2.4	.1	0.0 .4	.4	0.1 1.0	4.62	4.49 4.75
598	Sex Link	76.8	75.6 78.0	1.2	1.0 1.5	2.3	2.1 2.6	5.6	4.2 7.2	13.7	10.9 16.8	3.98	3.81 4.15
526	Noble N-60	76.2	75.0 77.4	1.7	1.4 2.0	2.2	1.9 2.4	.1	0.0 .5	.8	.2 1.8	4.40	4.23 4.57
37	Reg. Cornell Contr.	77.5	76.6 78.4	1.7	1.4 2.0	2.1	1.8 2.5	.2	.1 .4	.7	.4 1.2	4.32	4.22 4.42
352	Keystone B-1	76.6	75.5 77.7	1.1	.8 1.3	2.0	1.8 2.3	.1	0.0 .3	.9	.4 1.7	4.50	4.36 4.64
359	Keystone K-1700	75.2	73.8 76.6	1.0	.8 1.2	1.8	1.7 2.0	.5	.1 1.2	1.7	.6 3.4	4.43	4.22 4.64
382	Sil-Go-Links	77.7	76.5 78.9	1.2	1.0 1.5	2.8	2.5 3.1	4.1	3.0 5.3	15.7	12.9 18.6	3.99	3.82 4.16
152	Princess 55	80.7	79.8 81.6	1.2	.9 1.4	2.0	1.7 2.3	.1	0.0 .4	.7	.3 1.3	4.39	4.26 4.52
234	Dutchess 60	81.9	80.9 82.9	1.5	1.2 1.8	2.3	2.0 2.6	.2	.1 .5	.9	.4 1.6	4.20	4.06 4.34
160	Rapp Linecross	79.1	77.8 80.4	1.3	1.1 1.6	2.0	1.8 2.2	.1	0.0 .4	.2	0.0 .8	4.33	4.13 4.53
374	"65" Egg Champs	77.2	75.7 78.7	1.4	1.2 1.6	2.0	1.9 2.2	.6	.2 1.4	2.0	.7 4.1	4.37	4.15 4.59
181	Starcross 288	76.7	75.9 77.5	1.1	.9 1.3	1.9	1.7 2.2	.2	.1 .3	.8	.5 1.2	4.40	4.32 4.48
315	Starcross 292	76.5	75.5 77.5	1.4	1.1 1.7	1.8	1.5 2.0	.1	0.0 .4	.7	.3 1.4	4.47	4.33 4.61
333	Starcross 555	78.8	77.3 80.3	1.1	.9 1.3	2.2	2.0 2.4	3.2	2.0 4.7	17.6	13.4 22.3	4.20	3.99 4.41
566	Corvette A1	78.2	77.2 79.2	1.5	1.2 1.8	2.0	1.8 2.3	0.0	0.0 .2	.8	.3 1.6	4.24	4.08 4.40
533	Pearlette	72.3	71.3 73.3	1.3	1.0 1.5	1.8	1.5 2.1	.1	0.0 .3	.9	.4 1.5	4.46	4.34 4.58
186	Stever SC-300	78.5	77.5 79.5	1.3	1.1 1.6	2.1	1.8 2.4	.3	.1 .6	.5	.1 1.0	4.35	4.21 4.49
190	Stone's H 56	78.2	77.4 79.0	.6	.4 .8	1.4	1.2 1.7	0.0	0.0 .1	.5	.2 .8	4.37	4.28 4.46
336	Black Sex Link	77.1	76.1 78.1	1.9	1.6 2.2	1.9	1.6 2.1	5.5	4.3 6.8	23.5	20.6 26.6	3.76	3.60 3.92
384	Goldies	79.0	77.6 80.4	1.0	.8 1.3	2.3	2.0 2.5	1.1	.5 1.9	12.6	9.7 15.7	4.27	4.07 4.47

* If the confidence limits for two regressed means overlap, the two means are not significantly different at the 5% level.

STOCK CODE	STRAIN OR TRADENAME	ALBUMEN QUALITY		BLOOD SPOTS				MEAT SPOTS				SPECIFIC GRAVITY SCORE	
				1/8 INCH OR MORE		LESS THAN 1/8 INCH		1/8 INCH OR MORE		LESS THAN 1/8 INCH			
		(Haugb units)		RE- GRESSSED MEAN		80%* CONF. LIMITS		RE- GRESSSED MEAN		80%* CONF. LIMITS		RE- GRESSSED MEAN		80%* CONF. LIMITS
196	Wisco White	73.3 74.6	75.9	1.2	1.4	2.0	1.8 2.2	.2	0.0 .6	.7	0.1 1.8	3.89	3.70 4.08
381	Hybrid 3	74.9 76.1	77.3	1.6	1.9	2.3	2.1 2.6	2.9	2.0 3.9	7.4	5.5 9.6	4.28	4.11 4.45
199	Townline SC 30	76.4 77.5	78.6	1.2	1.5	2.0	1.8 2.3	.3	.1 .7	.9	.3 1.7	4.46	4.30 4.62
556	Belmont 292	77.1 78.2	79.3	1.4	1.6	1.9	1.6 2.1	.2	0.0 .6	.7	.2 1.5	4.13	3.97 4.29
534	Belmont 292 A	77.6 78.7	79.8	1.4	1.6	2.2	2.0 2.5	.8	.3 1.4	2.3	1.2 3.8	4.54	4.37 4.71
325	Pure Line	78.8 80.1	81.4	1.7	2.0	2.3	2.0 2.5	1.3	.6 2.2	.8	.2 2.0	4.59	4.40 4.78
305	Sex-Sal-Link-F	76.8 77.7	78.6	.7	.5 .9	2.6	2.3 3.0	7.4	6.5 8.3	18.9	17.0 20.8	3.67	3.56 3.78
349	New Red	75.7 77.1	78.5	1.2	1.0 1.4	2.1	1.9 2.3	6.3	4.6 8.2	20.0	16.0 24.4	3.72	3.52 3.92
386	Welp Line 910	75.2 76.4	77.6	.8	.6 1.0	1.8	1.5 2.0	0.0	.1 .1	.9	.3 1.7	4.37	4.21 4.53
290	Welp Line 937	76.2 77.0	77.8	1.1	.9 1.4	1.8	1.5 2.1	.1	0.0 .2	.3	.1 .6	4.21	4.13 4.29

* If the confidence limits for two regressed means overlap, the two means are not significantly different at the 5% level.

This 2-year summary includes performance data on 70 stocks that were entered in both the 1964-65 and 1965-66 tests and on 20 stocks that were entered only in the 1965-66 tests. The 1964-65 tests were conducted at 32 different locations, and the 1965-66 tests were conducted at 28 locations. Data for all 16 traits included in the combined analysis were reported for all locations except those in the Iowa Multiple Unit Test. Income Over Feed and Chick Cost and Feed Conversion values were not available from Iowa for either of the 2 years summarized and percent Large and Extra Large Eggs data were not available for 1965-66.

Replicate data were reported by 14 locations in both years. An additional six locations in 1964-65 and five in 1965-66 had replicate data, but the number of birds per replicate was too small for a valid analysis. Consequently, the replicate data were combined by entries within each of these locations, and the resulting entry average was used in the computations. This was done to more nearly equalize the variance among pens throughout all tests. The number of pens and the number of stocks tested at each location for the 2 years are given in the table on page 24.

The percentage data for both years for the six traits--growing mortality, laying mortality, large blood spots, small blood spots, large meat spots, and small meat spots--were converted to angles with the arcsin transformation prior to analysis. However, the test-year adjustment factors, shown in the table on pages 24 through 28, and the regressed means and confidence limits, shown for these traits in the tables on pages 6 through 20 are given in percent.

The replicate data were analyzed by least-squares procedures to obtain the test-year adjustment factors shown on pages 24 through 28, and the repeatability estimates and the correlations among pens within tests shown on page 23. The test-year adjustment factors were then used to adjust the simple stock average for test and year effects. The adjusted stock averages (the least-squares stock means) were then regressed toward the overall mean ($\hat{\mu}$) to account for variations in number of tests entered, number of years entered, and number of replicates per test. The formula used to compute the regressed mean is:

$$\text{Regressed Mean} = \hat{\mu} + \frac{r_{2/C}}{1+(k_3-1)x_1+(k_1-k_3)x_2+(k_2-k_3)r_1+[(1/C)-k_1-k_2+k_3]r_2}(\hat{s})$$

where: $\hat{\mu}$ = the average of the test and year adjusted stock means.

r_1 = repeatability within year.

r_2 = repeatability from year-to-year.

x_1 = the correlation among replicates within year and test.

x_2 = the correlation among pens of the same stock from year-to-year for the same test.

k_1 = an average of the number of pens per test (averaged over years).

k_2 = an average of the number of pens per year (averaged over tests).

k_3 = an average of the number of replicates per test-year subclass.

C = the diagonal inverse element for that stock. The reciprocal of C , i.e., $\frac{1}{C}$, is equal to nk_3 if the assumption is made that the adjustments for test-year effects are made without error; where n is the number of test-year subclasses in which that stock is entered.

\hat{s} = the test-year adjusted stock average minus the overall mean $\hat{\mu}$.

The correlations used in computing the regression coefficient were obtained from estimates of the variance components for stocks ($\hat{\sigma}_s^2$), the stock-X-test interaction ($\hat{\sigma}_{st}^2$), the stock-X-year interaction ($\hat{\sigma}_{sy}^2$) and the random error ($\hat{\sigma}_e^2$). The variance component estimates were obtained by equating the computed mean squares for these effects to their expectations. The mean square for stocks was adjusted for the test-year subclass by least-squares procedures for the effects of stocks and the test-year subclasses. The three-factor interaction was assumed to be non-existent. Ratios of the variance component estimates that were used to compute the correlations are given below:

$$\text{Correlation Among Replicates} = x_1 = \frac{\hat{\sigma}_s^2 + \hat{\sigma}_{st}^2 + \hat{\sigma}_{sy}^2}{\hat{\sigma}_s^2 + \hat{\sigma}_{st}^2 + \hat{\sigma}_{sy}^2 + \hat{\sigma}_e^2}$$

$$\text{Correlation from Year-to-Year (same test)} = x_2 = \frac{\hat{\sigma}_s^2 + \hat{\sigma}_{st}^2}{\hat{\sigma}_s^2 + \hat{\sigma}_{st}^2 + \hat{\sigma}_{sy}^2 + \hat{\sigma}_e^2}$$

$$\text{Repeatability from Test-to-Test (within year)} = r_1 = \frac{\hat{\sigma}_s^2 + \hat{\sigma}_{sy}^2}{\hat{\sigma}_s^2 + \hat{\sigma}_{st}^2 + \hat{\sigma}_{sy}^2 + \hat{\sigma}_e^2}$$

$$\text{Repeatability from Test-to-Test (between year)} = r_2 = \frac{\hat{\sigma}_s^2}{\hat{\sigma}_s^2 + \hat{\sigma}_{st}^2 + \hat{\sigma}_{sy}^2 + \hat{\sigma}_e^2}$$

An approximate standard error (SE) was computed for each regressed mean as follows:

$$SE = b \sqrt{C(\hat{\sigma}_e^2 + k_1 \hat{\sigma}_{st}^2 + k_2 \hat{\sigma}_{sy}^2)}$$

where b is the regression coefficient given above in the formula for the regressed mean. Confidence limits were then computed for each regressed mean as follows:

$$\text{Regressed Mean} \pm 1.3 \text{ SE}$$

The constant 1.3 was selected in order that the probability of the confidence limits overlapping by chance alone between any two means would be about 0.03. This makes the test of significance among regressed means almost comparable to using Duncan's range test at the 0.05 level of probability.

The following definitions of terms should be of help in interpreting the analytical procedures:

Overall mean	The average of the test-year adjusted means for all stocks. This is an estimate of what the overall average would have been had all stocks been entered in all tests in both years.
Range	The range represents the difference between the expected maximum and minimum performance among the 90 stocks, based on the regressed means.
Common stocks	Stocks that are being tested at more than one location.
Test-year adjustment factor	The amount added to or subtracted from the actual performance of the stocks at a given location in a given year to bring them to the average of all the location-year subclasses that had complete data. These factors were determined on an intrastock basis with a least-squares analysis and they are given on pages 24 through 28.
Repeatability within year	An intraclass correlation that measures the tendency for common stocks to rank the same from test-to-test within year. Theoretically, it can vary from 0.00 to 1.00.
Repeatability between years	A correlation which measures the tendency for common stocks to rank the same from test-to-test from one year to another. The difference between the repeatability within year and repeatability between years indicates the relative importance of the stock-x-year interaction.
Correlation among replicates	This correlation measures the repeatability among replicates of the same stock in the same test and year. The higher the correlation among replicates the less need there is for replication of stocks within test and year.
Correlation from year-to-year within tests	A correlation which measures the tendency for common stock to rank the same from year-to-year when tested at the same location. The difference in the repeatability between years and in the correlation from year-to-year within tests indicates the relative importance of the stock-x-test interaction.
Confidence limits	The confidence limits for each regressed mean are computed so that the probability is about 0.08 that the "true" stock mean lies within the interval. They are presented in this report, however, for the purpose of providing approximate tests of significance for differences among stocks.

ANALYTICAL DATA FOR THE TRAITS MEASURED

Trait	Overall means	Regressed means		Repeatability		Correlations within test	
				Within year (r_1)	Year-to-year (r_2)	Among replicates (x_1)	Year-to-year (x_2)
		Min.	Max.				
Growing mortality pct.....	3.3	2.9	3.6	0.1124	0.0231	0.2591	0.1698
Laying mortality pct.....	11.3	7.1	19.4	.1862	.1595	.2756	.2488
Age at 50 percent production.. days ...	177.8	168	189	.4527	.4385	.5589	.5447
Hen-housed egg production ... no.	211.9	186	232	.3528	.2695	.4900	.4067
Hen-day egg production pct.....	67.9	62.5	73.5	.3489	.2799	.4845	.4155
Income over feed and chick cost..... dollars .	1.92	1.39	2.30	.4164	.2635	.6004	.4475
Feed per pound of eggs lb.	3.01	2.78	3.32	.4866	.4366	.6461	.5960
Egg weight.....oz.....	25.1	24.0	26.9	.7010	.6447	.7772	.7209
Large and extra large eggs ... pct.....	69.3	53.3	84.2	.6790	.6468	.7817	.7494
Body weight..... lb.	4.8	4.0	6.5	.8197	.8050	.8532	.8385
Albumen quality .....H.U. ...	77.4	72.3	82.1	.6674	.6156	.7141	.6623
Large blood spots..... pct.	1.2	.6	1.9	.1070	.0914	.3564	.3408
Small blood spots..... pct.	2.0	1.3	3.1	.0705	.0705	.3517	.3517
Large meat spots..... pct. ....	.7	.0	7.5	.5875	.5875	.7239	.7239
Small meat spots pct.	3.0	.1	33.8	.7771	.7650	.8538	.8417
Specific gravity score.....	4.25	3.28	4.94	.5014	.4936	.5236	.5159

THE ADJUSTMENT FACTORS USED TO ADJUST FOR TEST DIFFERENCES

Test	Pens		Stocks tested		Mortality			
	1965	1966	1965	1966	Growing period		Laying period	
					1965	1966	1965	1966
	No.	No.	No.	No.	Pct.	Pct.	Pct.	Pct.
Alberta -----	22	22	11	11	+0.26	+0.22	+1.83	+1.55
Arizona - Floor -----	5	8	5	8	+ .07	- .02	-3.59	- .64
Arizona - Cage -----	5	8	5	8	+ .07	- .02	-1.84	-1.90
British Columbia -----	36	32	18	16	+ .24	+ .11	- .16	- .42
California -----	95	--	32	--	+ .41	----	+ .95	----
Central Canada (Test Ration)--	--	34	--	16	----	+ .40	----	.00
Central Canada (Std. Ration)--	68	34	32	16	+ .61	+ .54	- .08	- .28
Florida -----	48	--	15	--	+ .19	----	+ .05	----
Iowa Farm No. 7 -----	10	--	10	--	+ .13	----	+1.16	----
Iowa Farm No. 8 -----	10	--	10	--	+ .01	----	+ .89	----
Iowa Farm No. 21 -----	20	--	10	--	- .83	----	-1.09	----
Iowa Farm No. 22 -----	20	14	10	7	-4.98	-5.67	- .54	- .96
Iowa Farm No. 23 -----	20	--	10	--	-5.14	----	-3.88	----
Iowa Farm No. 24 -----	--	14	--	7	----	-1.45	----	.00
Iowa Farm No. 25 -----	--	14	--	7	----	-1.48	----	- .29
Iowa Farm No. 26 -----	--	14	--	7	----	-1.62	----	-1.76
Kansas Farm No. 1 -----	8	7	8	7	- .38	- .02	- .02	+ .14
Kansas Farm No. 3 -----	8	7	8	7	- .33	- .10	- .11	- .06
Kansas Farm No. 4 -----	8	7	8	7	.00	- .47	- .64	- .10
Kansas Farm No. 5 -----	8	7	8	7	- .24	- .10	+ .20	+ .70
Minnesota Farm No. 1 -----	16	16	16	16	+ .36	+ .18	+ .33	- .02
Missouri -----	80	76	40	38	.00	+ .05	- .27	+ .15
New Brunswick -----	32	16	16	8	+1.18	+1.36	+ .92	+ .81
New Hampshire No. 2 -----	16	16	16	16	- .32	+ .03	- .31	+ .04
New Hampshire No. 4 -----	16	16	16	16	- .04	- .12	+ .23	+ .06
New Hampshire No. 5 -----	16	--	16	--	+ .34	----	+2.63	----
New Hampshire No. 6 -----	16	16	16	16	- .04	- .11	+ .07	- .02
New Jersey -----	22	21	22	21	+ .12	+ .05	+ .01	- .07
Central New York -----	33	32	32	16	-1.53	-1.93	- .08	- .27
North Carolina -----	40	40	20	20	+ .69	+ .80	+ .85	- .01
Pennsylvania -----	32	32	32	32	- .02	- .08	+ .12	+ .01
Rhode Island -----	36	--	18	--	- .10	----	+ .24	----
Tennessee -----	48	44	24	22	-1.15	-4.39	+ .76	.00
Texas (1 bird) -----	30	24	21	21	- .10	+ .04	.00	+ .11
Texas (2 birds) -----	30	24	21	21	.00	- .03	+ .58	- .32
Wisconsin -----	58	50	29	25	- .02	- .02	- .82	-3.38

Test	Age at 50 percent production		Egg production hen housed		Egg production hen day		Income over feed and chick cost	
	1965	1966	1965	1966	1965	1966	1965	1966
	Days	Days	No.	No.	Pct.	Pct.	\$	\$
Alberta -----	+11.36	+12.76	-29.31	-27.70	-3.77	-4.19	+0.29	-0.22
Arizona - Floor -----	+ 3.39	+10.32	+21.02	+ .46	+5.14	+1.39	+ .36	-1.55
Arizona - Cage -----	+ 7.39	+ 5.32	+24.78	+15.10	+7.88	+2.69	+ .33	-1.42
British Columbia -----	+ 1.50	- .30	+ 8.33	+11.89	+ .16	+ .13	+1.18	+ .29
California -----	+ 4.76	-----	-17.93	-----	+5.21	----	+ .16	----
Central Canada (Test Ration)-	-----	+ 2.93	-----	- 8.30	----	-3.77	----	- .13
Central Canada (Std. Ration)-	+ 4.72	+ 2.92	+ 5.86	+ 9.42	+ .69	+ .66	+ .82	- .07
Florida -----	+ 6.51	-----	-38.36	-----	+1.21	----	-2.16	----
Iowa Farm No. 7 -----	-11.01	-----	+10.69	-----	- .02	----	----	----
Iowa Farm No. 8 -----	- 2.81	-----	+12.00	-----	+1.50	----	----	----
Iowa Farm No. 21 -----	- 6.86	-----	+29.77	-----	+1.61	----	----	----
Iowa Farm No. 22 -----	- 4.33	- 6.13	+21.14	+24.69	+ .75	+ .71	----	----
Iowa Farm No. 23 -----	- 2.76	-----	+51.94	-----	+6.81	----	----	----
Iowa Farm No. 24 -----	-----	-10.17	-----	+11.77	----	-2.10	----	----
Iowa Farm No. 25 -----	-----	-16.95	-----	+41.71	----	+4.41	----	----
Iowa Farm No. 26 -----	-----	- 2.13	-----	+29.90	----	+1.26	----	----
Kansas Farm No. 1 -----	-18.97	-24.41	+27.40	+26.36	+4.69	+6.24	+1.53	+ .38
Kansas Farm No. 3 -----	-17.77	-10.29	+ .91	+24.54	-3.44	+4.81	+ .95	+ .50
Kansas Farm No. 4 -----	+ 9.43	-21.27	+ 5.53	+19.89	- .05	+1.00	+1.07	- .60
Kansas Farm No. 5 -----	-22.86	-24.35	+ 7.43	+ 7.99	- .25	+ .81	+ .88	- .21
Minnesota Farm No. 1 -----	+ 7.11	+ 3.00	-10.38	+ .47	+ .36	+1.82	+ .93	+ .34
Missouri -----	+ 2.63	+ 6.86	- 1.83	-21.22	-4.10	-2.63	+ .18	-1.29
New Brunswick -----	+14.07	+10.80	-15.44	-20.30	-3.11	-6.25	+ .20	- .61
New Hampshire No. 2 -----	-13.10	-16.49	+ 5.59	- 1.62	-3.28	-4.81	- .38	- .11
New Hampshire No. 4 -----	- .87	- 2.66	- 6.59	- 3.03	-1.73	-1.77	- .27	-1.16
New Hampshire No. 5 -----	- .34	-----	-26.67	-----	-6.26	----	- .12	----
New Hampshire No. 6 -----	- 2.62	- 3.48	+11.10	+18.17	-2.63	+4.08	+ .07	- .85
New Jersey -----	+10.38	+ 7.21	-19.37	- 9.95	-3.39	-1.57	+ .73	- .66
Central New York -----	+ 4.13	+ 2.33	+ 1.90	+ 5.45	+ .69	+ .65	+ .33	- .56
North Carolina -----	+ 7.73	+ 9.79	-25.64	-17.15	-4.97	-4.78	+ .92	+ .61
Pennsylvania -----	+ 1.59	- .21	-17.62	-14.06	-4.72	-4.75	- .01	- .90
Rhode Island -----	+ 9.79	-----	-19.42	-----	-5.43	----	- .77	----
Tennessee -----	+12.77	+ 4.55	- 7.87	+14.59	+4.78	+2.42	+ .03	-1.22
Texas (1 bird) -----	+ .39	- 7.74	+10.87	+18.82	+2.44	+4.50	+ .81	- .41
Texas (2 birds) -----	-11.97	- 3.83	+24.98	+18.12	+7.78	+2.65	+1.05	- .51
Wisconsin -----	+ 1.20	+ 3.95	+ 7.98	+ 4.78	- .07	+1.58	+ .58	+ .67

Test	Feed per pound of eggs		Egg weight		Large and Extra large eggs		Body weight	
	1965 Lbs.	1966 Lbs.	1965 Oz.	1966 Oz.	1965 Pct.	1966 Pct.	1965 Lbs.	1966 Lbs.
Alberta -----	-0.12	-0.13	+0.37	+0.21	+ 6.75	+ 3.98	-0.38	-0.20
Arizona - Floor -----	+ .03	+ .10	+ .27	+ .40	- 1.18	+19.52	+ .52	+ .61
Arizona - Cage -----	+ .07	+ .19	- .09	+ .01	- 6.22	+10.94	+ .36	+ .60
British Columbia -----	- .26	- .28	- .20	- .14	+ 2.19	+ 5.02	- .16	- .07
California -----	+ .10	----	- .33	----	- 9.47	----	- .27	----
Central Canada (Test Ration)--	----	+ .31	----	- .16	----	+ 2.74	----	- .35
Central Canada (Std. Ration) --	+ .05	+ .03	+ .25	+ .32	+ 1.76	+ 4.60	- .28	- .19
Florida -----	+ .20	----	+ .05	----	- 7.42	----	- .06	----
Iowa Farm No. 7 -----	----	----	+ .41	----	----	----	+ .18	----
Iowa Farm No. 8 -----	----	----	+ .14	----	----	----	+ .25	----
Iowa Farm No. 21 -----	----	----	+ .04	----	----	----	+ .09	----
Iowa Farm No. 22 -----	----	----	+ .60	+ .67	----	----	+ .27	+ .36
Iowa Farm No. 23 -----	----	----	+ .94	----	----	----	+ .27	----
Iowa Farm No. 24 -----	----	----	----	+ .70	----	----	----	- .04
Iowa Farm No. 25 -----	----	----	----	- .71	----	----	----	+ .03
Iowa Farm No. 26 -----	----	----	----	+ .76	----	----	----	+ .19
Kansas Farm No. 1 -----	- .14	- .58	-1.20	- .07	- 4.56	- 7.72	+ .05	+ .19
Kansas Farm No. 3 -----	- .37	- .90	+ .12	+ .23	- 2.70	+12.77	- .01	- .03
Kansas Farm No. 4 -----	+ .42	+ .43	+ .12	+ .76	+ .17	+22.75	+ .07	+ .06
Kansas Farm No. 5 -----	+ .04	- .12	- .93	+ .20	- 2.25	-10.80	+ .05	+ .13
Minnesota Farm No. 1 -----	- .47	- .45	+ .04	- .68	-10.43	- 9.46	- .19	- .28
Missouri -----	- .24	- .08	- .02	+ .13	- 6.53	- 9.42	+ .09	+ .15
New Brunswick -----	+ .26	+ .31	+ .20	- .03	+ 6.88	+ 9.84	- .39	- .34
New Hampshire No. 2 -----	+ .12	- .14	+ .03	+ .01	- 2.12	- 5.55	+ .14	+ .23
New Hampshire No. 4 -----	+ .26	+ .23	+ .09	+ .16	- 7.04	- 4.20	+ .04	+ .14
New Hampshire No. 5 -----	- .10	----	+ .80	----	- 1.22	----	+ .08	----
New Hampshire No. 6 -----	+ .09	+ .28	- .38	- .53	- 8.81	- 9.48	- .35	- .24
New Jersey -----	+ .04	- .05	- .18	- .11	+ 7.20	+13.43	- .11	+ .19
Central New York -----	+ .09	+ .07	- .22	- .15	- 1.12	+ 1.72	+ .02	+ .11
North Carolina -----	+ .15	+ .23	- .37	- .32	- 1.69	- 3.75	- .38	- .40
Pennsylvania -----	+ .19	+ .16	+ .03	+ .10	- 2.71	+ .12	+ .10	+ .20
Rhode Island -----	- .38	----	+ .27	----	- 1.04	----	- .19	----
Tennessee -----	+ .12	- .02	- .26	- .22	-12.15	-12.53	- .14	- .01
Texas (1 bird) -----	+ .11	+ .21	+ .08	- .13	+ 8.87	+11.22	+ .15	+ .33
Texas (2 birds) -----	- .03	+ .28	- .14	+ .21	+10.15	+ 8.64	+ .15	+ .20
Wisconsin -----	- .12	- .17	+ .92	+ .15	- 5.01	- 4.73	- .05	+ .10

Test	Albumen quality		Blood spots 1/8 inch or more		Blood spots less than 1/8 inch	
	1965	1966	1965	1966	1965	1966
	H. U.	H. U.	Pct.	Pct.	Pct.	Pct.
Alberta -----	+ 2.89	+ 1.89	+0.01	+0.02	-0.15	0.00
Arizona - Floor -----	+ .55	- .15	+ .34	+ .51	+ .13	+ .12
Arizona - Cage -----	- 2.51	- 1.31	+ .57	+ .74	+ .31	+ .34
British Columbia -----	- 2.67	- 1.91	.00	.00	+ .01	.00
California -----	+ 1.50	-----	- .23	----	- .40	----
Central Canada (Test Ration) ---	-----	+ 4.91	----	- .13	----	- .03
Central Canada (Std. Ration) ---	+ 4.07	+ 4.83	- .02	- .03	- .01	- .07
Florida -----	- 3.27	-----	- .08	----	- .03	----
Iowa Farm No. 7-----	- 5.75	-----	- .07	----	+ .45	----
Iowa Farm No. 8-----	- 3.40	-----	.00	----	+1.17	----
Iowa Farm No. 21-----	- 1.55	-----	.00	----	+ .08	----
Iowa Farm No. 22-----	- 2.89	- 2.13	.00	.00	+ .68	+ .42
Iowa Farm No. 23-----	- 2.57	-----	.00	----	+ .96	----
Iowa Farm No. 24-----	-----	- 4.61	----	- .11	----	+ .04
Iowa Farm No. 25-----	-----	- 4.22	----	.00	----	+ .48
Iowa Farm No. 26-----	-----	- 3.16	----	- .13	----	+ .80
Kansas Farm No. 1 -----	- 3.90	- 2.97	- .20	+ .01	.00	- .18
Kansas Farm No. 3 -----	- 3.22	- 1.11	- .17	+ .20	.00	.00
Kansas Farm No. 4 -----	- 2.10	- 3.90	- .87	.00	- .05	+ .01
Kansas Farm No. 5 -----	- 5.58	- 2.58	- .06	- .08	.00	+ .05
Minnesota Farm No. 1-----	-10.24	- 8.30	- .04	- .23	+ .63	+ .16
Missouri-----	- 3.85	- 3.26	+ .03	- .06	- .91	- .54
New Brunswick -----	+13.44	+11.24	.00	- .05	.00	.00
New Hampshire No. 2 -----	+ 3.15	+ 4.81	+ .32	+ .09	- .13	- .09
New Hampshire No. 4 -----	+ 4.00	+ 4.76	+ .39	+ .35	.00	- .03
New Hampshire No. 5 -----	+ 3.80	-----	+ .49	----	+1.71	----
New Hampshire No. 6 -----	+ 1.96	+ 6.47	+ .35	- .02	+ .52	- .57
New Jersey -----	- 6.16	- 1.39	+ .13	+ .07	+ .76	- .04
Central New York-----	- .29	+ .47	- .09	- .11	- .11	- .25
North Carolina-----	- .14	+ 1.97	- .07	- .16	- .01	- .10
Pennsylvania -----	+ .21	+ .96	.00	.00	+ .13	+ .03
Rhode Island -----	+ 2.72	-----	.00	----	- .03	----
Tennessee-----	+ 3.41	+ 4.34	.00	- .04	- .04	- .06
Texas (1 bird) -----	- 2.33	- 4.45	- .01	.00	+ .11	+ .01
Texas (2 birds) -----	- 3.59	- 3.58	- .01	- .10	+ .01	+ .03
Wisconsin-----	- 1.93	- 1.64	- .04	- .16	.00	+ .01

Test	Meat spots 1/8 inch or more		Meat spots less than 1/8 inch		Specific gravity score	
	1965 Pct.	1966 Pct.	1965 Pct.	1966 Pct.	1965	1966
Alberta -----	-0.32	-0.14	-0.19	+0.04	+0.18	-0.04
Arizona - Floor-----	+ .09	+ .07	+ .21	+ .36	-2.34	-2.03
Arizona - Cage -----	+ .09	+ .02	+ .34	+ .38	-2.91	-2.26
British Columbia-----	+ .06	+ .03	+ .28	+ .33	+1.04	+1.59
California -----	+ .04	----	+ .26	----	- .78	----
Central Canada (Test Ration) ---	----	- .06	----	- .81	----	+ .85
Central Canada (Std. Ration) ---	- .33	- .43	-2.76	-2.61	+ .90	+1.45
Florida -----	- .06	----	+ .26	----	- .04	----
Iowa Farm No. 7-----	+ .08	----	+ .01	----	- .50	----
Iowa Farm No. 8-----	- .11	----	- .34	----	- .53	----
Iowa Farm No. 21-----	.04	----	+ .35	----	- .04	----
Iowa Farm No. 22-----	+ .01	.00	+ .08	+ .11	+2.03	+2.57
Iowa Farm No. 23-----	+ .01	----	+ .35	----	- .38	----
Iowa Farm No. 24-----	----	.00	----	+ .30	----	+4.39
Iowa Farm No. 25-----	----	.00	----	- .20	----	+4.39
Iowa Farm No. 26-----	----	- .01	----	+ .13	----	+4.13
Kansas Farm No. 1 -----	- .01	- .33	-1.04	-1.88	-3.33	+ .85
Kansas Farm No. 3 -----	- .01	.00	- .11	+ .01	-1.96	- .81
Kansas Farm No. 4 -----	- .10	- .12	- .83	.00	-1.87	- .80
Kansas Farm No. 5 -----	- .22	+ .22	- .60	- .06	-2.00	-1.00
Minnesota Farm No. 1-----	.00	+ .07	+ .18	+1.28	- .22	+ .24
Missouri-----	+ .01	+ .21	+ .14	+ .20	+ .83	- .01
New Brunswick -----	- .24	- .55	- .64	- .81	+1.47	+2.30
New Hampshire No. 2 -----	+ .40	+ .01	- .15	- .18	+ .84	+2.29
New Hampshire No. 4 -----	+ .10	+ .06	- .74	- .66	+1.66	+2.20
New Hampshire No. 5 -----	+ .82	----	+ .57	----	+1.68	----
New Hampshire No. 6 -----	+ .24	- .14	- .03	-1.24	+ .85	+1.63
New Jersey-----	+ .32	- .08	- .13	- .63	-2.30	-1.65
Central New York -----	.00	.00	+ .49	+ .56	+ .68	+1.22
North Carolina-----	+ .09	+ .03	+ .08	+ .25	+1.12	+1.72
Pennsylvania -----	+ .47	+ .37	+1.41	+1.52	-1.21	- .67
Rhode Island -----	-2.09	----	+ .01	----	+ .78	----
Tennessee-----	- .04	.00	.00	+ .06	+ .76	+ .54
Texas (1 bird)-----	.00	+ .02	+ .22	+ .41	- .51	-1.23
Texas (2 birds) -----	.00	- .04	+ .25	+ .13	-1.54	- .45
Wisconsin-----	+ .06	.00	+ .34	+ .22	+ .91	+1.29

Alberta Random Sample Egg Production Test

R. H. McMillan, Alberta Department of Agriculture, Edmonton, Alta., Canada

Arizona Random Sample Test

Ernest L. Parker, Arizona State University, Tempe, Ariz. 85281

British Columbia Random Sample Egg Production Test, Abbotsford

W. H. Pope, British Columbia Department of Agriculture, Victoria, B. C., Canada

Central Random Sample Egg Production Test

M. S. Mitchell, Poultry Division, Canada Department of Agriculture, Ottawa, Ont., Canada

Iowa Multiple Unit Poultry Test

Elston P. Erickson, Iowa Poultry Association, National Plans Division Board,
535 E. Lincolnway, Ames, Iowa 50010

Kansas Multiple Unit Test

M. E. Jackson, Call Hall, Kansas State University, Manhattan, Kans. 66504

Minnesota Random Sample Egg Production Test, Stillwater and St. Cloud

Robert E. Moehrle, Department of Agriculture, Dairy and Food, State Office Building,
St. Paul, Minn. 55101

Missouri Official Random Sample Poultry Test

Charles W. McElyea, Box 109, Mountain Grove, Mo. 65711

New Brunswick Random Sample Egg Production Test

Bernard R. Bartlett, Department of Agriculture, Fredericton, N. B., Canada

New Hampshire Multiple Unit Egg Production Test

W. C. Skoglund, Department of Poultry Science, University of New Hampshire, Durham, N. H. 03824

New Jersey Random Sample Egg Laying Test

John J. Dowling, Jr., Rutgers University, New Brunswick, N. J. 08903

Central New York Official Random Sample Poultry Test, Horseheads

J. H. Bruckner, Poultry Department, Cornell University, Ithaca, N. Y. 14850

North Carolina Random Sample Egg Laying Test, Salisbury

G. A. Martin, Poultry Extension Dept., North Carolina State University, Raleigh, N. C. 27607

Pennsylvania Random Sample Laying Test

Paul J. Turek, Route 2, Harrisburg, Pa. 17110

Rhode Island Random Sample Laying Test

L. T. Smith, University of Rhode Island, Kingston, R. I. 02881

Tennessee Random Sample Laying Test

O. E. Goff, Poultry Department, University of Tennessee, Knoxville, Tenn. 37916

Texas Random Sample Egg Production Test

Bill H. Doran, Texas A & M University, College Station, Tex. 77843

Wisconsin Random Sample Egg Production Test, Oregon

Arnold Guthrie, Department of Agriculture, 4802 Sheboygan Avenue, Madison, Wis. 53702

The two tests listed below did not complete their testing period in time to have their data included in this summary:

California Official Random Sample Egg Laying Test

Emery A. Johnson, Route 3, 2718 No. 99 Highway, Modesto, Calif. 95350

Florida Random Sample Test

A. W. O'Steen, Chipley, Fla. 32428

MANAGEMENT SUMMARY

Test	MANAGEMENT											
	Hatch date	Housing date	Length of test	Ent-ries	Rep.	Birds per rep.	Brooding	Rearing	Laying ^{1/}	Sq. feet per bird	Lighting	
	1965	1965	Days	No.	No.	No.					Rearing	Laying
Alberta	3/29	8/23	500	11	2	50	Litter	Range	Litter	3.4	Natural	14 hr.
Arizona Floor	3/22	8/20	500	8	1	50	--do--	Litter	--do--	2.0	14 hr.	14 hr.
Arizona Cage	3/22	8/20	500	8	2	50	--do--	--do--	Cage-2	.7	14 hr.	14 hr.
									Cage-5	.6	--do--	--do--
Br. Columbia	4/1	8/28	500	18	2	80	--do--	--do--	Litter-Slat	1.8	7 hr.	14 to 18 hr.
Cen. Canada	4/6	9/1	497	17	4	65	--do--	--do--	Litter	3.2	<u>2/</u>	<u>3/</u>
Iowa No. 22	3/29	9/10	486	10	1	60	--do--	--do--	Cage	---	Natural	14 hr.
Iowa No. 24	3/29	9/8	486	10	1	60	--do--	--do--	-----	---	--do--	14 hr.
Iowa No. 25	3/29	9/21	486	10	2	95	--do--	--do--	-----	---	--do--	14 hr.
Iowa No. 26	3/29	9/9	486	10	2	45	--do--	--do--	-----	---	--do--	14 hr.
Kansas No. 1	5/15	10/12	500	7	1	151	--do--	Lit.-Slat	Litter-Slat	2.0	--do--	14 hr.
Kansas No. 3	5/15	10/12	500	7	1	200	--do--	Litter	Litter	1.5	--do--	Natural ^{4/}
Kansas No. 4	5/15	10/12	500	7	1	110	Battery	Wire	Cage-55	.7	--do--	14 hr.
Kansas No. 5	5/15	10/12	500	7	1	156	Litter	Lit.-Wire	Lit.-Wire	1.9	--do--	Natural ^{5/}
Minnesota No. 1	3/30	8/27	500	16	1	100	--do--	Range	Litter-Slat	2.0	--do--	14 hr.
Missouri	3/8	8/5	500	40	2	50	--do--	--do--	Litter	2.0	--do--	14 hr.
New Brunswick	3/25	8/23	495	8	2	75	--do--	Litter	--do--	2.3	14 hr.	14 hr.
New Hampshire												
No. 2	5/11	10/18	498	16	1	250	--do--	--do--	--do--	2.3	Natural	14 hr.
No. 4	5/11	10/18	498	16	1	65	--do--	--do--	--do--	2.3	--do--	14 hr.
No. 6	5/11	10/18	498	16	1	112	--do--	--do--	Cage-2	.7	--do--	14 hr.
New Jersey-F	3/23	8/20	500	21	1	25	--do--	--do--	Litter	4.0	--do--	14 hr.
New Jersey-C	3/23	8/20	500	21	1	25	--do--	--do--	Cage-25	1.0	--do--	14 hr.
Cent. N. Y.	2/26	7/11	500	16	2	50	--do--	Range	Litter	3.8	--do--	14 hr.
No. Carolina	3/12	8/9	500	20	2	50	--do--	Litter	--do--	3.5	--do--	14 hr.
Pennsylvania	4/25	9/20	500	30	3	25	--do--	--do--	--do--	3.4	--do--	14 hr.
Tennessee	3/31	8/18	500	22	4	15	--do--	--do--	Cage-1	1.3	--do--	Natural ^{6/}
Texas	3/9	8/6	500	24	3	8	--do--	--do--	Cage-1	1.3	--do--	15 hr.
					3	16	--do--	--do--	Cage-2	.6	--do--	15 hr.
Wisconsin	3/8	8/4	500	25	2	40	--do--	Range	Litter	1.5	--do--	14 hr.

^{1/} The number after the word cage indicates how many birds per cage.

^{2/} At day old--18-1/2 hr. ; light decreased 15 minutes per wk. to meet at 15-1/2 hr. at longest day then natural decrease until 13-1/2 hr.

^{3/} 13-1/2 hr. until natural increase takes light hours to 15-1/2 hr. in mid-June, then light held at 15-1/2 hr. until end of test.

^{4/} Natural daylight plus 3 to 5 hr. artificial (increasing).

^{5/} Increase light program.

^{6/} 14 hr. per day until 10 mo. ; thereafter increase 15 minutes per week.

MANAGEMENT SUMMARY

RATIONS												Test
Percent protein			Meta. energy-cal/lb. ^{1/}			C/P ration ^{2/}			Weeks birds are on-			
Start.	Grow.	Lay.	Start.	Grow.	Lay.	Start.	Grow.	Lay.	Start.	Grow.	Lay.	
20.2	14.9	15.8	1235	1226	1326	60.0	82.0	84.0	8	12	51	Alberta
21.5	18.0	17.5	1335	1225	1338	62.0	68.0	76.4	8	12	51	Arizona Floor
21.5	18.0	17.5	1335	1225	1338	62.0	68.0	76.4	8	12	51	Arizona Cage
19.8	18.0	16.5	----	----	----	----	----	----	6	15	50	Br. Columbia
21.7	16.1	17.1	1300	1330	1276	59.9	82.6	74.6	8	13	50	Can. Canada
----	----	----	----	----	----	----	----	----	--	--	--	Iowa No. 22
----	----	----	----	----	----	----	----	----	--	--	--	Iowa No. 24
----	----	----	----	----	----	----	----	----	--	--	--	Iowa No. 25
----	----	----	----	----	----	----	----	----	--	--	--	Iowa No. 26
21.0	16.0	17.0	----	----	----	----	----	----	6	12	53	Kansas No. 1
20.0	18.0	16.0	----	----	----	----	----	----	8	3	60	Kansas No. 3
20.0	15.0	16.0	----	----	----	----	----	----	6	18	47	Kansas No. 4
20.0	17.0	17.0	----	----	----	----	----	----	5	16	50	Kansas No. 5
21.5	15.4	17.1	1256 ^{3/}	1257 ^{3/}	1260 ^{3/}	58.4	81.6	73.7	8	16	47	Minnesota No. 1
20.5	17.0	16.9	1330	1289	1295	64.8	73.2	77.6	8	13	50	Missouri
20.7	14.9	16.0	1300	1330	1360	63.0	89.0	85.0	8	14	50	New Brunswick
----	----	----	----	----	----	----	----	----	8	13	50	New Hampshire
20.9	16.0	<u>4/</u>	1340	1319	<u>5/</u>	64.0	82.0	<u>6/</u>	8	13	50	No. 2
20.9	16.0	<u>4/</u>	1340	1319	<u>5/</u>	64.0	82.0	<u>6/</u>	8	13	50	No. 4
21.2	----	18.8	1227	----	1144	57.9	----	60.9	6	0	65	New Jersey-Floor
21.2	----	18.8	1227	----	1144	57.9	----	60.9	6	0	65	New Jersey-Cage
----	----	16.8	----	----	1372	----	----	81.7	9	12	50	Cent. N. Y.
20.0	16.0	16.0	1249	1238	1234	62.4	77.4	77.1	8	13	50	No. Carolina
21.0	17.0	18.0	1300 ^{3/}	1357 ^{3/}	1354 ^{3/}	61.9	79.8	75.2	10	11	50	Pennsylvania
21.9	17.2	16.8	1333	1347	1271	60.7	78.4	75.9	10	11	50	Tennessee
21.5	17.5	17.5	1264 ^{3/}	1324 ^{3/}	1376 ^{3/}	58.8	75.7	78.6	8	13	50	Texas
20.0	17.0	16.0	1205	1230	1270	60.0	72.0	79.0	6	5	50	Wisconsin
	14.0			1259			90.0			10		

^{1/} Metabolizable energy is the maximum quantity of the energy of the feed which possibly may be used by the chicken.

^{2/} Metabolizable calories divided by percent crude protein.

^{3/} Approximate metabolizable energy computed from productive energy, using 70 percent as the conversion factor.

^{4/} Varies from 15.5 to 18.5.

^{5/} Varies from 1255 to 1337.

^{6/} Varies from 72.0 to 81.0.

MANAGEMENT SUMMARY

Test	Entries Brooded Inter- mingled	LAYING HOUSE			
		Artificial Heat Used	Minimum Temperature	Insulation Material Used	Ventilation
Alberta	Yes	Yes	55°F	Shavings--4 in. wall; 6 in. ceiling	Positive pressure
Arizona	Yes	No	----	None	Slat house
British Columbia	No	No	----	Rock wool--2 in. wall; 4 in. ceiling	Positive pressure
Central Canada	No	Yes	45°F	Rock wool--3 in. wall; 8 in. ceiling	Exhaust fan in roof
Iowa No. 22	Yes	---	----	----	----
Iowa No. 24	Yes	---	----	----	----
Iowa No. 25	Yes	---	----	----	----
Iowa No. 26	Yes	---	----	----	----
Kansas (All farms)	Yes	No	----	Roof only	Natural via windows
Minnesota	Yes	No	40°F	Rock wool--3 in. wall; 6 in. ceiling	Exhaust fans
Missouri	No	No	----	Shavings in wall and ceiling	Exhaust fans in ceiling
New Brunswick	Yes	Yes	55°F	Shavings--4 in. wall; 8 in. ceiling	Positive pressure
New Hampshire No. 2	Yes	No	----	None	Natural via windows
New Hampshire No. 4	Yes	No	----	Insulated	Natural via windows
New Hampshire No. 6	Yes	No	----	Insulated	Positive pressure
New Jersey	Yes	Yes	50°F	None	Exhaust fans
New York	Yes	No	----	None	Natural via windows
North Carolina	No	No	----	None	Natural via windows
Pennsylvania	Yes	Yes	35°F	None	Natural via windows
Tennessee	Yes	No	----	Half of house with insulation value of 4R and half with 13R	Winter--positive pressure; summer-- exhaust fans
Texas	Yes	No	----	None	Natural via windows
Wisconsin	Yes	No	----	Rock wool bat-- 2 in. wall and ceiling	Positive pressure

MANAGEMENT SUMMARY

VACCINATION												Test
New Castle		Infectious Bronchitis		Fowl Pox		Laryngo-trachitis		Avian Encephalo-myelitis		Cocci-diosis Control		
Age	Type	Age	Type	Age	Type	Age	Type	Age	Type	Age	Type	
wks.		wks.		wks.		wks.		wks.		wks.		
1	Dust	1	Dust	None		None		None		0-8	Amprol	Alberta
16	Dust	16	Dust									
40	Dust	40	Dust									
4	Water	1	Internasal	8	Wing Web	None		None		1-20	Unistat	Arizona
16	Water	16	Water									
1	Internasal	3	Spray	None		None		12	Water	0-20	Amprol	British Columbia
3	Spray	14	Spray							26	Sulfa-quinoxaline	
14	Spray											
2	Spray	2	Spray	8	Wing Web	8	Vent	None		0-8	Amprol	Central Canada
20	Spray	11	Spray									
--	-----	--	-----	--	-----	--	-----	--	-----	---	-----	Iowa No. 22
--	-----	--	-----	--	-----	--	-----	--	-----	---	-----	Iowa No. 24
--	-----	--	-----	--	-----	--	-----	--	-----	---	-----	Iowa No. 25
--	-----	--	-----	--	-----	--	-----	--	-----	---	-----	Iowa No. 26
1	Water	1	Water	None		None		None		0-8	-----	Kansas (All Farms)
4	Water	4	Water									
16	Water	16	Water									
5	Water	5	Water	9	Wing Web	None		None		1	Cocci-Vac	Minnesota
14	Water	14	Water							0-14	Ni Dra Fur	
										0-14	Tri Thy Adol	
2	Water	2	Water	8	Wing Web	8	Vent	None		---	Unistat	Missouri
6	Water	6	Water									
14	Water	14	Water									
	None	2	Water	None		None		None		1-16	Amprol	New Brunswick
		16	Water									(N. H. No. 2
2	Dust	2	Dust	None		None		None		1/2	Cocci-Vac	(N. H. No. 4
20	Dust	20	Dust									(N. H. No. 6
2	Water	12	Water	10	Feather follicle	4	Eye	None		8	Amprol	New Jersey
16	Water					10	Eye					
2	Occular	17	Live	22	Pigeon	None		None			None	New York
26	Spray											
44	Spray											
1	Occular	1	Occular	13	Wing Web	None		17	Water	1	Cocci-Vac	North Carolina
4	Water	15	Water									
15	Water											
4	Water	4	Water	None		None		None			None	Pennsylvania
8	Water	8	Water									
16	Water	16	Water									
1 day	Occular	1 day	Occular	20	Wing Web	None		None		0-20	Amprol	Tennessee
10	Occular	10	Occular									
20	Occular	20	Occular									
1/2	Modified live	4	Modified live	12	Wing Web	None		None		0-13	Sulfa-quinoxaline	Texas
2	Modified live	14	Virulent									
4	Modified live											
1	Water	1	Water	9	Wing Web	None		18	Oral	1	Cocci-Vac	Wisconsin
4	Spray	16	Water									
16	Water											

Stocks Entered in 1965-66 Random Sample Egg Production Tests
(Listed alphabetically and showing tests entered)

Stock Code	Breeder	Stock	No. Entries	Alta.	Ariz.	Br. Col.	Cent. Can.	Iowa	Kansas	Minn.	Mo.	New Bruns.	N. H.	N. J.	C. N. Y.	N. C.	Pa.	Tenn.	Texas	Wis.
578	Andrews	Andrews Leghorn	1			X														
599	Andrews	K. B. 83	1				X													
145	Animal Res. Inst.	Ottawa	1				X													
570	Animal Res. Inst.	Kentville R. B.	3				X													
10	Anthony	Queen	6																	
138	Arbor Acres	B310	8		X															
376	Babcock	Babcock B-300	4				X													
307	Babcock	B390	13				X													
377	Babcock	B390	3				X													
230	Beamsdale	Beamsdale 66	1																	
361	Bender	Money Maker	6																	
361	Burling	Tri Cross	1																	
593	Burpee	Burpee #43	1																	
283	Cameron	Cameron #924	4																	
372	Carey	Carey's New Nick	4																	
304	Cashman	Astronauts	2																	
31	Cashman	Hi-Cash	8																	
268	Colonial	Super Star	1	X																
380	Colonial	Master Mating	1																	
330	Colonial	True-Line #142	1																	
289	Colonial	True-Line 365B	9																	
508	Clark	Paymaster 101	1																	
309	Davis	Davis Combiner	3																	
48	DeKalb	DeKalb 131	1																	
277	DeKalb	DeKalb 151	1		X															
371	Demler	D-65	6		X															
514	deZeeuw	deZeeuw 752	3																	
575	deZeeuw	deZeeuw 752A	1	X			X													
350	Erath	Erath Mestiza	5	X																
518	Fisher	Fisher 103	3	X			X													
601	Fisher	Fisher 503	1																	
368	Fox Den	Little Red Hen	1																	
65	Garber	Garber G x 291	3																	
66	Garber	Garber G 200	7																	
506	Gardiner	Kanaka White	1				X													
69	Garrison	Golden Sex Link	2																	
379	Garrison	Black Gold Sex Link	1																	
70	Gasson	Gasson G 33	2																	
373	Ghostley	Ghostley Cage Queen	1																	
338	Ghostley	Ghostley Pearl 63	9																	
80	Hansen	Criss Cross H 25	4																	
322	Hanson	Super Nick A	2																	
225	Harco	Harco Sex Link	5																	
86	Hardy	Hardy Sex Link	1																	
383	Hardy	Hardy's Sex Link	1																	

Stocks Entered in 1965-66 Random Sample Egg Producing Tests - Continued
(Listed alphabetically and showing tests entered)

Stock Code	Breeder	Stock	No. Entries	Alta.	Ariz.	Br. Col.	Cent. Can.	Iowa	Kansas	Minn.	Mo.	New Bruns.	N. H.	N. J.	N. C. Y.	N. C.	Pa.	Tenn.	Texas	Wis.
88	Heisdorf & Nelson	H & N Nick Chick	5						X						X	X	X		X	X
316	Heisey	H-K Cross	1																	X
321	Honegger	Honegger H-80	1								X		X		X	X	X		XX	X
92	Honegger	Honegger Layer	12			X	X			X	X		X		X	X	X			X
378	Hubbard	Golden Comet	3																	
96	Hy-Line	Hy-Line 934	6		X	X	X	X	X	X	X	X	X					X	XXX	X
360	Hy-Line	Hy-Line 934 D	12					X	X	X	X	X	X					X	XX	X
356	Ideal	Ideal 236	7							X	X									
340	Ideal	Ideal H-3-W-2	2							X	X									
341	Kerr	Kerr P-K 26	1																	
352	Keystone	Keystone B-1	4								X						X			
359	Keystone	Keystone K-1700	1								X						X		X	X
375	Kimber	Kimber K 137 A	10					X	X	X	X		X			X	X		X	X
110	Kimber	Kimber K 137	8			X	X				X						X			
111	Kimber	Kimber K 141	4			X	X				X						X			X
227	Klongland	Klongland K Cross	1								X									X
117	Lawton	Buff Sex Link	4								X						X			X
576	Man. Dairy & Pkty. Coop.	Keyline 110 C	2	X			X					X								
598	Nelson	Sex Link	1																	
526	Noble	Noble N-60	1				X													
37	No. Cen. Reg. Lab.	Reg. Cornell Controll	6								X				X	X		X	X	X
382	Parks	Sil-Go-Links	2								X				X	X				X
152	Pa.-Ind. Farm Bur.	Princess 55	4							X	X				X	X				X
234	Pa.-Ind. Farm Bur.	Dutchess 60	4								X									
160	Rapp	Rapp Linecross	1											X						
374	Schuyler	"65" Egg Champs	1														X			
333	Shaver	Shaver Starcross 555	1								X	X					X			
315	Shaver	Shaver Starcross 292	2							X	X	X				X	X	X	XX	X
181	Shaver	Shaver Starcross 288	14	X		X	X			X	X	X								
533	Starline	Pearlette	3	X		X	X													
566	St. Augustin	Corvette A-1	1											X		X	X			
186	Stever	Stever SC300	4					X		X			X	X						
190	Stone	Stone H 56	5																	
336	Sturtevant	Black Sex Link	1																	
384	Sturtevant	Goldies	1																	
196	Sunnyside	Wisco White	1																	X
381	Sykes	Hybrid 3	3																	X
199	Townline	Townline SC30	1																	
534	Triska	Belmont	1	X																
556	Triska	Belmont 292	2	X																
325	Univ. of Tennessee	Pure Line	1															X		X
305	Warren	Sex-Sal-Link-F	3																	
385	Warren	Sex-Sal-Link-F-1	1												X	X				
349	Webster	New Red	1																	
290	Welp	Welp Line 937	8																	
386	Welp	Welp Line 910	1					X											X	

The information in the Range Group Ranking section of this publication deals only with the records established during the 1965-66 test year.

The performance of each entry in the 17 Random Sample Egg Production Tests conducted during 1965-66 is reported as the Range Group Rank of the entry for the trait measured. These rankings were called Quartile Ranking in past years. However, the computations used to determine the rank were not changed and were determined in the following manner. For each trait the entries in each test were aligned in descending order from the most desirable to the least desirable performance. The "mean" or average performance for the trait was then determined. All entries above the mean are in range group 1 or 2 and those below the mean are in range group 3 or 4. The dividing point for the entries above or below the mean is the midpoint of the range between the mean and the top or bottom entry. An illustration follows.

Stocks entered in the Pennsylvania Test had a mean, or average, of 220.46 eggs for the trait "Egg Per Pullet Housed." The highest average number of eggs laid by any entry in this test was 250.20, and the lowest average number laid by any entry was 195.60 eggs. To arrive at the dividing point between the 1st and 2d range groups, the mean (220.46) was subtracted from the highest number of eggs (250.20). The result, 29.74 eggs, was divided by two to get the midpoint of the range (14.87 eggs). This was subtracted from the highest number of eggs (250.20 - 14.87) to arrive at the dividing point (235.33 eggs) between the 1st and 2d range groups. To determine the dividing point between the 3d and 4th range groups, the same procedure was used, except that the lowest average number of eggs (195.60) was subtracted from the mean (220.46). This difference, or range (24.86 eggs) was then divided by two, and the result (12.43 eggs) was subtracted from the mean (220.46 - 12.43) to get the dividing point (208.03) between the 3d and 4th range groups. These determinations for each trait and test are tabulated on pages 37 through 40.

The breeders of the stocks tested are listed in alphabetical order and the Range Group Rankings of each entry of the stock is shown under the breeder's name (pages 41 through 51). Each entry is also identified by the abbreviated name of the entrant. If the sample was drawn from a source other than the entrant's hatchery or supply flock, the abbreviated name of the source of the sample is shown in parentheses following the entrant's name.

The listing of Entry Traits in the four range groups and of all entries of each stock in one table allows the reader to quickly evaluate a stock based on this method of analysis. It should be kept in mind, however, that this method provides just four broad classifications. One-tenth of an egg or one-tenth of a percent difference in mortality could move an entry one Range Group Rank up or down, depending on its place in the range grouping.

LIST OF ENTRANTS OTHER THAN BREEDER OF STOCK

<u>Name and Address</u>	<u>Stock Entered</u>
Arizona Star Farm Hatchery, Tucson, Ariz.	DeKalb
Arizona State Hatchery, Tucson, Ariz.	Kimber
Cherokee Hatchery, Route 1, Tyler, Tex.	Honegger
Coombs Poultry Farm, Inc., Sedgwick, Kan.	Hy-Line
DeWitt's Hatchery, Nacogdoches, Tex.	Shaver
Garrison, Earl W., Inc., Bridgeton, N. J.	Stever
Greider Leghorn Farms, Inc., Mt. Joy, Pa.	Shaver
Hy-Lay Hatcheries, Inc., Box 1111, Bryan, Tex.	Hy-Line
Hy-Line Chicks, Box 730, Chatham, Ontario, Canada	Hy-Line
Intercontinental Hatchery, P. O. Box 222, Miami Springs, Fla.	Ideal
Johnson Hatchery, Hamilton, Tex.	Hy-Line
Jordan Brothers Hatchery, Bridgewater, Va.	Ideal
Kazmeier Hatchery, Box 791, Bryan, Tex.	Hy-Line
Parks Poultry Farm, Route #4, Altoona, Pa.	Keystone
Pa.-Indiana Farm Bureau Co-Op., R. R. 2, Lafayette, Ind.	Farm Bureau
Pioneer Hybrid Corn Co. of Canada, Chatham, Ontario, Canada	Hy-Line
Pratt's Hatchery, Glendale, Ariz.	Arbor Acres & Stone
Walton Eggs, Inc., Stone Mountain, Ga.	Erath
Western Hatcheries, 183 Cole Street, Dallas, Tex.	Kimber
Wheelock, Walter E., Chambersburg, Pa.	Ghostley

SUMMARY OF IMPORTANT DATA FOR ALL RANDOM SAMPLE EGG LAYING TESTS

Traits Measured	Alberta		Arizona		British Columbia		Central Canada	
Net Income Over Feed and Chick								
Costs Per Pullet Housed - Ave.	\$2,258		\$3,643		\$1,423		\$2,065	
Range Group - 1	\$2.850	2.554	\$4.030	3.836	\$2.080	1.751	\$3.040	2.552
Range Group - 2	2.553	2.258	3.835	3.643	1.750	1.423	2.551	2.065
Range Group - 3	2.257	1.969	3.642	3.381	1.422	0.956	2.064	1.532
Range Group - 4	1.968	1.680	3.380	3.120	0.954	0.490	1.531	1.000
Eggs Per Pullet Housed - Ave.	243.19		214.10		204.71		212.06	
Range Group - 1	273.30	258.24	230.00	222.05	242.80	223.75	254.10	233.08
Range Group - 2	258.23	243.19	222.04	214.10	223.74	204.71	233.07	212.06
Range Group - 3	243.18	229.99	214.09	202.45	204.70	184.55	212.05	188.48
Range Group - 4	229.98	216.80	202.44	190.80	184.54	164.40	188.47	164.90
Days to 50% Production - Ave.	165.0		167.1		175.0		175.6	
Range Group - 1	153.0	159.0	160.0	163.6	166.0	170.5	168.0	171.8
Range Group - 2	159.1	165.0	163.7	167.1	170.6	175.0	171.9	175.6
Range Group - 3	165.1	169.5	167.2	173.6	175.1	182.5	175.7	182.3
Range Group - 4	169.6	174.0	173.7	180.0	182.6	190.0	182.4	189.0
% Mortality Growing Period - Ave.	1.86		3.04		2.01		1.82	
Range Group - 1	0.00	0.93	1.80	2.42	0.60	1.31	0.00	0.91
Range Group - 2	0.94	1.86	2.43	3.04	1.32	2.01	0.92	1.82
Range Group - 3	1.87	3.93	3.05	3.77	2.02	3.21	1.83	3.86
Range Group - 4	3.94	6.00	3.78	4.50	3.22	4.40	3.87	5.90
% Mortality Laying House - Ave.	5.64		16.88		17.46		15.26	
Range Group - 1	2.00	3.82	9.00	12.94	5.60	11.53	7.40	11.33
Range Group - 2	3.83	5.64	12.95	16.88	11.54	17.46	11.34	15.26
Range Group - 3	5.65	8.82	16.89	21.94	17.47	25.28	15.27	23.23
Range Group - 4	8.83	12.00	21.95	27.00	25.29	33.10	23.24	31.20
Egg Size - Average	24.92		25.03		24.97		24.71	
Range Group - 1	25.70	25.31	26.60	25.81	25.60	25.28	25.90	25.30
Range Group - 2	25.30	24.92	25.80	25.03	25.27	24.97	25.29	24.71
Range Group - 3	24.91	24.56	25.02	24.76	24.96	24.58	24.70	24.15
Range Group - 4	24.55	24.20	24.75	24.50	24.57	24.20	24.14	23.60
% Large & Extra Large Eggs - Ave.	64.57		55.76		61.36		63.31	
Range Group - 1	72.30	68.43	72.40	64.08	68.20	64.78	78.40	70.85
Range Group - 2	68.42	64.57	64.07	55.76	64.77	61.36	70.84	63.31
Range Group - 3	64.56	60.28	55.75	51.13	61.35	57.48	63.30	54.51
Range Group - 4	60.27	56.00	51.12	46.50	57.47	53.60	54.50	45.70
Pounds Feed Per Pound Eggs - Ave.	3.030		2.670		3.239		2.789	
Range Group - 1	2.840	2.935	2.540	2.605	2.980	3.110	2.510	2.650
Range Group - 2	3.936	3.030	2.606	2.670	3.111	3.239	2.651	2.789
Range Group - 3	3.031	3.165	2.671	2.730	3.240	3.475	2.790	2.975
Range Group - 4	3.166	3.330	2.731	2.790	3.476	3.710	2.976	3.160
Albumen-Haugh Units - Ave.	75.65		78.09		79.68		72.04	
Range Group - 1	82.30	78.97	85.80	81.94	85.70	82.69	77.60	74.82
Range Group - 2	78.96	75.65	81.93	78.09	82.68	79.68	74.81	72.04
Range Group - 3	75.64	73.02	78.08	75.54	79.67	77.29	72.03	69.37
Range Group - 4	73.01	70.40	75.53	73.00	77.28	74.90	69.36	66.70
Blood Spots - All Sizes - Ave.	3.56		1.16		4.43		5.44	
Range Group - 1	1.70	2.63	0.30	0.72	0.80	2.62	2.90	4.17
Range Group - 2	2.64	3.56	0.73	1.16	2.63	4.43	4.18	5.44
Range Group - 3	3.57	5.43	1.17	1.53	4.44	6.47	5.45	8.72
Range Group - 4	5.44	7.30	1.54	1.90	6.48	8.50	8.73	12.00

Trait Measured	Iowa		Kansas		Minnesota		Missouri	
Net Income Over Feed and Chick								
Costs Per Pullet Housed - Ave.	-----		\$2.110		\$1.800		\$3.344	
Range Group - 1	-----	-----	\$2.370	2.240	\$2.450	2.125	\$4.120	3.732
Range Group - 2	-----	-----	2.239	2.110	2.124	1.800	3.731	3.344
Range Group - 3	-----	-----	2.109	1.930	1.799	1.540	3.343	2.877
Range Group - 4	-----	-----	1.929	1.750	1.539	1.280	2.876	2.410
Eggs Per Pullet Housed - Ave.	200.40		201.34		236.10		231.21	
Range Group - 1	206.20	203.30	214.00	207.67	263.30	249.70	259.80	245.50
Range Group - 2	203.29	200.40	207.66	201.34	249.69	236.10	245.49	231.21
Range Group - 3	200.39	195.15	201.33	194.67	236.09	229.80	231.20	210.45
Range Group - 4	195.14	189.90	194.66	188.00	229.79	223.50	210.44	189.70
Days to 50% Production - Ave.	183.0		192.9		168.5		174.0	
Range Group - 1	179.0	181.0	187.0	190.0	163.0	165.8	160.0	167.0
Range Group - 2	181.1	183.0	190.1	192.9	165.9	168.5	167.1	174.0
Range Group - 3	183.1	184.0	193.0	195.5	168.6	173.8	174.1	181.0
Range Group - 4	184.1	185.0	195.6	198.0	173.9	179.0	181.1	188.0
% Mortality Growing Period - Ave.	8.91		5.06		1.59		2.70	
Range Group - 1	6.90	7.91	3.30	4.18	0.00	0.80	0.00	1.35
Range Group - 2	7.92	8.91	4.19	5.06	0.81	1.59	1.36	2.70
Range Group - 3	8.92	10.16	5.07	5.68	1.60	2.30	2.71	4.40
Range Group - 4	10.17	11.40	5.69	6.30	2.31	3.00	4.41	6.10
% Mortality Laying House - Ave.	11.94		10.99		7.54		12.96	
Range Group - 1	8.00	9.97	7.80	9.40	1.00	4.27	4.00	8.48
Range Group - 2	9.98	11.94	9.41	10.99	4.28	7.54	8.49	12.96
Range Group - 3	11.95	15.72	11.00	13.90	7.55	11.27	12.97	21.98
Range Group - 4	15.73	19.50	13.91	16.80	11.28	15.00	21.99	31.00
Egg Size - Average	24.71		25.04		25.42		25.25	
Range Group - 1	25.30	25.00	25.60	25.32	26.30	25.86	27.20	26.22
Range Group - 2	24.99	24.71	25.31	25.04	25.85	25.42	26.21	25.25
Range Group - 3	24.70	24.50	25.03	24.72	25.41	25.11	25.24	24.52
Range Group - 4	24.49	24.30	24.71	17.53	25.10	24.80	24.51	23.80
% Large & Extra Large Eggs - Ave.	-----		65.17		80.16		79.84	
Range Group - 1	-----	-----	71.20	68.18	85.00	82.58	96.30	88.07
Range Group - 2	-----	-----	68.17	65.17	82.57	80.16	88.06	79.84
Range Group - 3	-----	-----	65.16	61.13	80.15	77.23	79.83	72.47
Range Group - 4	-----	-----	61.12	57.10	77.22	74.30	72.46	65.10
Pounds Feed Per Pound Eggs - Ave.	-----		3.151		3.318		3.014	
Range Group - 1	-----	-----	3.000	3.076	2.940	3.129	2.700	2.857
Range Group - 2	-----	-----	3.077	3.151	3.130	3.318	2.858	3.014
Range Group - 3	-----	-----	3.152	3.221	3.319	3.474	3.015	3.262
Range Group - 4	-----	-----	3.222	3.290	3.475	3.630	3.263	3.510
Albumen-Haugh Units - Ave.	81.07		80.97		87.06		82.23	
Range Group - 1	85.00	83.03	85.60	83.28	94.40	90.73	86.30	84.26
Range Group - 2	83.02	81.07	83.27	80.97	90.72	87.06	84.25	82.23
Range Group - 3	81.06	79.58	80.96	78.68	87.05	84.13	82.22	79.26
Range Group - 4	79.57	78.10	78.67	76.40	84.12	81.20	79.25	76.30
Blood Spots - All Sizes - Ave.	3.43		4.14		4.64		6.68	
Range Group - 1	2.10	2.77	2.10	3.12	0.00	2.32	2.00	4.34
Range Group - 2	2.78	3.43	3.13	4.14	2.33	4.64	4.35	6.68
Range Group - 3	3.44	4.57	4.15	5.02	4.65	8.02	6.69	10.29
Range Group - 4	4.58	5.70	5.03	5.90	8.03	11.40	10.30	13.90

SUMMARY OF IMPORTANT DATA FOR ALL RANDOM SAMPLE EGG LAYING TESTS (Continued)

New Brunswick	New Hampshire	New Jersey	New York	North Carolina
\$2.635	\$2.863	\$2.685	\$2.090	\$14.22
\$3.330 2.982	\$3.720 3.291	\$3.440 3.062	\$3.200 2.645	\$1.980 1.701
2.981 2.635	3.290 2.863	3.061 2.685	2.644 2.090	1.700 1.422
2.634 2.292	2.862 2.386	2.684 2.127	2.089 1.345	1.421 1.091
2.291 1.950	2.385 1.910	2.126 1.570	1.344 0.600	1.090 0.760
233.78	204.18	227.08	208.54	239.47
264.30 249.04	237.60 220.89	248.80 237.94	238.80 223.67	267.90 253.68
249.03 233.78	220.88 204.18	237.93 227.08	223.66 208.54	253.67 239.47
233.77 216.69	204.17 189.29	227.07 210.94	208.53 191.02	239.46 211.58
216.68 199.60	189.28 174.40	210.93 194.80	191.01 173.50	211.57 183.70
166.8	185.1	167.2	172.2	169.1
160.0 163.4	171.0 178.1	154.0 160.6	166.0 169.1	161.0 165.1
163.5 166.8	178.2 185.1	160.7 167.2	169.2 172.2	165.2 169.1
166.9 170.4	185.2 189.1	167.3 172.1	172.3 174.1	169.2 176.1
170.5 174.0	189.2 193.0	172.2 177.0	174.2 176.0	176.2 183.0
0.35	4.58	2.67	14.34	1.84
0.00 0.18	2.20 3.39	0.00 1.34	3.40 8.87	0.00 0.92
0.19 0.35	3.40 4.58	1.35 2.67	8.88 14.34	0.93 1.84
0.36 0.88	4.59 6.69	2.68 4.09	14.35 22.97	1.85 3.47
0.89 1.40	6.70 8.80	4.10 5.50	22.98 31.60	3.48 5.10
5.83	11.54	16.29	19.31	10.34
2.70 4.27	5.60 8.57	6.00 11.15	7.00 13.16	3.00 6.67
4.28 5.83	8.58 11.54	11.16 16.29	13.17 19.31	6.68 10.34
5.84 7.32	11.55 14.57	16.30 23.15	19.32 28.56	10.35 19.67
7.33 8.80	14.58 17.60	23.16 30.00	28.57 37.80	19.68 29.00
25.61	26.43	25.10	25.66	25.56
27.10 26.35	27.10 26.76	26.20 25.65	27.10 26.38	27.20 26.38
26.34 25.61	26.75 26.43	25.64 25.10	26.37 25.66	26.37 25.56
25.60 25.00	26.42 25.86	25.09 24.40	25.65 24.83	25.55 25.08
24.99 24.40	25.85 25.30	24.39 23.70	24.82 24.00	25.07 24.60
64.88	86.85	55.01	71.49	72.94
78.50 71.69	93.20 90.02	76.60 65.80	85.30 78.39	84.50 78.72
71.68 64.88	90.01 86.85	65.79 55.01	78.38 71.49	78.71 72.94
64.87 57.74	86.84 82.07	55.00 45.20	71.48 60.29	72.93 68.42
57.73 50.60	82.06 77.30	45.19 35.40	60.28 49.10	68.41 63.90
2.735	2.907	2.979	2.931	2.704
2.360 2.548	2.520 2.714	2.740 2.860	2.720 2.826	2.540 2.622
2.549 2.735	2.715 2.907	2.861 2.979	2.827 2.931	2.623 2.704
2.736 2.903	2.908 3.094	2.980 3.170	2.932 3.181	2.705 2.807
2.904 3.070	3.095 3.280	3.171 3.360	3.182 3.430	2.806 2.910
64.03	71.66	80.85	78.16	77.34
68.00 66.01	78.00 74.83	87.80 84.32	83.60 80.88	81.00 79.17
66.00 64.03	74.82 71.66	84.31 80.85	80.87 78.16	79.16 77.34
64.02 62.56	71.65 68.43	80.84 76.32	78.15 76.43	77.33 76.02
62.55 61.10	68.42 65.20	76.31 71.80	76.42 74.70	76.01 74.70
4.54	8.69	2.20	5.66	4.30
2.80 3.67	2.10 5.40	0.70 1.45	3.10 4.38	1.90 3.10
3.68 4.54	5.41 8.69	1.46 2.20	4.39 5.66	3.11 4.30
4.55 5.82	8.70 11.65	2.21 3.45	5.67 7.28	4.31 5.90
5.83 7.10	11.66 14.60	3.46 4.70	7.29 8.90	5.91 7.50

Trait Measured	Pennsylvania		Tennessee		Texas		Wisconsin	
Net Income Over Feed and Chick								
Costs Per Pullet Housed - Ave.	\$3.021		\$3.226		\$2.553		\$1.397	
Range Group - 1	\$3.810	3.415	\$4.070	3.648	\$3.200	2.876	\$2.050	1.723
Range Group - 2	3.414	3.021	3.647	3.226	2.875	2.553	1.722	1.397
Range Group - 3	3.020	2.590	3.225	2.378	2.552	2.171	1.396	1.069
Range Group - 4	2.589	2.160	2.377	1.530	2.170	1.790	1.068	0.740
Eggs Per Pullet Housed - Ave.	220.46		209.63		208.42		202.12	
Range Group - 1	250.20	235.33	242.10	225.86	239.00	223.71	230.30	216.21
Range Group - 2	235.32	220.46	225.85	209.63	223.70	208.42	216.20	202.12
Range Group - 3	220.45	208.03	209.62	181.41	208.41	194.01	202.11	185.81
Range Group - 4	208.02	195.60	181.40	153.20	194.00	179.60	185.80	169.50
Days to 50% Production - Ave.	181.2		171.9		176.7		179.3	
Range Group - 1	156.0	168.6	150.0	161.0	168.0	172.4	173.0	176.2
Range Group - 2	168.7	181.2	161.1	171.9	172.5	176.7	176.3	179.3
Range Group - 3	181.3	190.1	172.0	179.5	176.8	181.4	179.4	183.7
Range Group - 4	190.2	199.0	179.6	187.0	181.5	186.0	183.8	188.0
% Mortality Growing Period - Ave.	6.70		10.28		4.48		3.86	
Range Group - 1	1.10	3.90	1.00	5.64	0.00	2.24	1.10	2.48
Range Group - 2	3.91	6.70	5.65	10.28	2.25	4.48	2.49	3.86
Range Group - 3	6.71	10.95	10.29	21.64	4.49	7.24	3.87	7.98
Range Group - 4	10.96	15.20	21.65	33.00	7.25	10.00	7.99	12.10
% Mortality Laying House - Ave.	12.44		9.32		14.61		22.72	
Range Group - 1	2.70	7.57	0.00	4.66	4.20	9.41	8.80	15.76
Range Group - 2	7.58	12.44	4.67	9.32	9.42	14.61	15.77	22.72
Range Group - 3	12.45	16.27	9.33	17.21	14.62	19.31	22.73	30.76
Range Group - 4	16.28	20.10	17.22	25.10	19.32	24.00	30.77	38.80
Egg Size - Average	25.40		25.39		25.03		24.91	
Range Group - 1	27.20	26.30	26.80	26.09	25.70	25.36	26.60	25.75
Range Group - 2	26.29	25.40	26.08	25.39	25.35	25.03	25.74	24.91
Range Group - 3	25.39	24.90	25.38	24.59	25.02	24.51	24.90	24.20
Range Group - 4	24.89	24.40	24.58	23.80	24.50	24.00	24.19	23.50
% Large & Extra Large Eggs - Ave.	79.63		82.04		60.08		73.61	
Range Group - 1	91.12	85.41	90.30	86.17	69.00	64.54	88.20	80.90
Range Group - 2	85.40	79.63	86.16	82.04	64.53	60.08	80.89	73.61
Range Group - 3	79.62	74.46	82.03	76.37	60.07	50.59	73.60	64.95
Range Group - 4	74.45	69.30	76.36	70.70	50.58	41.10	64.94	56.30
Pounds Feed Per Pound Eggs - Ave.	2.933		2.959		2.641		3.078	
Range Group - 1	2.710	2.822	2.630	2.795	2.500	2.571	2.870	2.974
Range Group - 2	2.823	2.933	2.794	2.959	2.572	2.641	2.975	3.078
Range Group - 3	2.934	3.142	2.958	3.330	2.642	2.786	3.079	3.259
Range Group - 4	3.143	3.350	3.329	3.700	2.787	2.930	3.260	3.440
Albumen-Haugh Units - Ave.	77.13		74.52		80.74		79.60	
Range Group - 1	83.50	80.31	80.50	77.51	85.20	82.97	85.10	82.35
Range Group - 2	80.30	77.13	77.50	74.52	82.96	80.74	82.34	79.60
Range Group - 3	77.12	74.56	74.51	72.21	80.73	78.87	79.59	77.05
Range Group - 4	74.55	72.00	72.20	69.90	78.86	77.00	77.04	74.50
Blood Spots - All Sizes - Ave.	3.06		5.55		3.28		4.39	
Range Group - 1	0.00	1.53	0.70	3.13	1.40	2.34	1.50	2.95
Range Group - 2	1.54	3.06	3.14	5.55	2.35	3.28	2.96	4.39
Range Group - 3	3.07	4.93	5.56	10.18	3.29	5.24	4.40	6.70
Range Group - 4	4.94	6.80	10.19	14.80	5.25	7.20	6.71	9.00

RANGE GROUP RANK OF ENTRIES IN RANDOM SAMPLE EGG PRODUCTION TEST

ENTRY IDENTIFICATION	TEST	BREEDING	STRAIN OR TRADENAME	INCOME OVER FEED AND CHICK COST (\$)	EGG PRO- DUCTION (No.)	AGE AT 50% PRO- DUCTION (Days)	GROWING MORTALITY (%)	LAYING MORTALITY (%)	EGG WEIGHT (oz)	LARGE AND EXTRA LARGE EGGS (%)	FEED PER POUND OF EGGS (lbs)	ALBUMEN QUALITY (H.U.)	BLOOD SPOTS (%)
Andrews, J. J., R. R. #3, Chilliwack, B. C.	B. C.	WL	SX	Andrews	1	2	1	1	4	4	1	3	3
Andrews, B. C.													
Andrews, J. J., R. R. #3, Chilliwack, B. C.	C. C.	WL	SX	K. B. 83	2	2	1	2	4	4	2	3	3
Andrews, B. C.													
Animal Research Institute, Ottawa, Ontario													
A. R. I., Ont.	C. C.	WL	PS	Random Bred	4	4	3	4	4	4	4	2	3
Animal Research Institute, Kentville, Nova Scotia													
Kentville, N. S.	B. C.	WL	PS	Kentville R. B. C.	3	2	1	2	3	4	3	3	3
A. R. I., N. S.	C. C.	WL	PS	Kentville R. B. C.	3	2	2	1	3	3	3	3	2
Kentville, N. S.	N. B.	WL	PS	Kentville R. B. C.	3	3	1	3	4	4	2	1	4
Anthony, Geo. M. & Sons, Strausstown, Pa.													
Anthony, Pa.	Mo.	WL	SX	Anthony	3	3	1	3	2	2	3	1	3
Anthony, Pa.	N. J.	WL	SX	Anthony	3	2	3	1	3	3	3	2	1
Anthony, Pa.	C. N. Y.	WL	SX	Anthony	2	2	4	1	2	2	2	2	3
Anthony, Pa.	Pa.	WL	SX	Anthony	2	2	4	1	2	3	2	2	2
Anthony, Pa.	Tenn.	WL	SX	Anthony	2	2	4	1	2	3	2	1	2
Anthony, Pa.	Wis.	WL	SX	Anthony	2	2	1	3	3	3	2	3	2
Arbor Acres Farm, Inc., Glastonbury, Conn.													
Pratt, Ariz.	Ariz.	WL	SX	Queen	4	4	2	4	3	2	4	2	3
Arbor Acres, Conn. (Frost, Minn.)	Minn.	WL	SX	Queen	3	3	3	2	3	2	3	3	1
Arbor Acres, Conn.	Mo.	WL	SX	Queen	4	4	4	4	3	3	3	2	3
Arbor Acres, Conn.	N. J.	WL	SX	Queen	3	4	4	4	3	3	3	2	2
Arbor Acres, Conn. (A. A., N. C.)	N. C.	WL	SX	Queen	4	4	4	4	3	3	4	2	3
Arbor Acres, Conn.	Pa.	WL	SX	Queen	3	2	1	3	4	4	3	2	2
Arbor Acres, Conn. (A. A., Ark.)	Texas	WL	SX	Queen	4	4	3	4	3	3	3	2	3
Arbor Acres, Conn. (A. A., Ind.)	Wis.	WL	SX	Queen	3	3	2	4	3	3	3	2	3

RANGE GROUP RANK OF ENTRIES IN RANDOM SAMPLE EGG PRODUCTION TEST (Continued)

ENTRY IDENTIFICATION	TEST	BREEDING	STRAIN OR TRADENAME	INCOME OVER FEED AND CHICK COST (\$)	EGG PRO- DUCTION (No.)	AGE AT 50% PRO- DUCTION (Days)	GROWING MORTALITY (%)	LAYING MORTALITY (%)	Egg Weight (oz)	EXTRA LARGE EGGS (%)	FEED POUND OF EGGS	ALBUMEN QUALITY (H.U.)	BLOOD SPOTS (%)
Babcock Poultry Farm, Inc., Ithaca, N. Y.													
Babcock, N. Y. (Stewart, Alberta).....	Alta.	WL	Babcock B-300	3	2	1	1	1	3	2	3	3	1
Babcock, N. Y. (Stewart, Alberta).....	B. C.	WL	Babcock B-300	1	1	1	2	1	1	1	1	3	3
Babcock, N. Y. (Mallett's, Ont.).....	C. C.	WL	Babcock B-300	2	2	1	3	2	2	2	1	3	2
Babcock, N. Y. (Mallett's, Ont.).....	Kans.	WL	Babcock B-300	2	2	1	4	4	2	1	1	3	4
Babcock, N. Y. (Nelson's, Kans.).....	Minn.	WL	Babcock B-300	3	2	1	3	1	3	3	3	2	2
Babcock, N. Y. (Allstate, Minn.).....	Mo.	WL	Babcock B-300	1	1	1	2	2	3	3	1	3	3
Babcock, N. Y.	N. H.	WL	Babcock B-300	1	1	1	3	2	4	4	1	3	1
Babcock, N. Y. (Babcock, Pa.).....	N. J.	WL	Babcock B-300	2	2	1	2	3	2	2	1	3	2
Babcock, N. Y. (Harrolds, Ga.).....	N. C.	WL	Babcock B-300	1	1	1	1	1	2	2	1	4	2
Babcock, N. Y. (Babcock, Pa.).....	Pa.	WL	Babcock B-300	2	3	1	4	4	3	2	1	3	2
Babcock, N. Y.	Tenn.	WL	Babcock B-300	1	1	1	2	2	3	3	1	3	2
Babcock, N. Y. (Albers, Texas).....	Texas	WL	Babcock B-300	1	1	1	4	2	2	2	1	3	3
Babcock, N. Y. (Noble, Wis.).....	Wis.	WL	Babcock B-300	1	1	1	3	2	2	2	1	3	2
Babcock Poultry Farm, Inc., Ithaca, N. Y.													
Babcock, N. Y.	Mo.	WL	Babcock B-310	3	3	3	2	2	2	2	3	4	1
Babcock, N. Y.	Pa.	WL	Babcock B-310	2	2	3	3	1	2	2	2	4	2
Babcock, N. Y.	Tenn.	WL	Babcock B-310	3	3	3	3	2	1	2	3	4	1
Babcock, N. Y.	Texas	WL	Babcock B-310	2	2	1	1	1	1	1	2	4	3
Babcock Poultry Farm, Inc., Ithaca, N. Y.													
Babcock, N. Y.	N. H.	RIRxBPR BX	Babcock B-390	3	3	3	1	3	2	2	3	2	4
Babcock, N. Y.	CNY	RIRxBPR BX	Babcock B-390	2	2	1	2	2	2	2	3	4	3
Babcock, N. Y.	Pa.	RIRxBPR BX	Babcock B-390	2	2	1	1	2	2	1	3	2	4
Beamsdale Farm, Lawndale, N. C.													
Beamsdale, N. C.	Mo.	WL	Beamsdale 66	3	3	3	4	3	3	3	3	1	2
Brender's Leghorns, Ferndale, N. Y.													
Brender's, N. Y.	Minn.	WL	Money Maker	2	4	3	3	2	2	2	3	3	2
Brender's, N. Y.	Mo.	WL	Money Maker	3	3	4	3	2	2	2	3	3	3
Brender's, N. Y.	N. J.	WL	Money Maker	1	2	4	4	1	1	1	1	3	4
Brender's, N. Y.	CNY	WL	Money Maker	2	2	4	2	2	2	2	1	3	3
Brender's, N. Y.	Pa.	WL	Money Maker	2	2	3	3	1	2	3	2	3	1
Brender's, N. Y.	Wis.	WL	Money Maker	2	3	3	3	2	2	2	2	3	1
Burling Hatchery, Oxford, Pa.													
Burling, Pa.	Pa.	RIRxWPR BX	Golden Tri-Cross	4	4	3	1	4	2	2	4	3	3
Burpee, Arthur K., Woodstock, N. B.													
Burpee, N. B.	N. B.	WL	Burpee #43	1	2	4	4	1	3	3	1	1	4

RANGE GROUP RANK OF ENTRIES IN RANDOM SAMPLE EGG PRODUCTION TEST (Continued)

ENTRY IDENTIFICATION		TEST	BREEDING	STRAIN OR TRADE NAME	INCOME OVER FEE AND CHICK COST (\$)	EGG PRO- DUCTION (Hens housed)	AGE AT 50% PRO- DUCTION (Days)	GROWING MORTALITY (%)	LAYING MORTALITY (%)	EGG WEIGHT (oz)	LARGE AND EXTRA LARGE EGGS (%)	FEED PER EGG (lbs)	ALBUMEN QUALITY (H.U.)	BLOOD SPOTS (%)
Cameron Leghorn Res. Farm, Beaver Springs, Pa.														
Cameron, Pa.	Mo.	WL	SX	Cameron #924	3	2	3	2	3	3	3	3	2	2
Cameron, Pa.	CNY	WL	SX	Cameron #924	3	3	3	2	2	3	3	3	2	2
Cameron, Pa.	Pa.	WL	SX	Cameron #924	2	2	3	3	2	3	3	3	2	2
Cameron, Pa.	Tenn.	WL	SX	Cameron #924	2	2	4	2	3	2	1	3	2	3
Carey Farms, Marion, Ohio														
Carey, Ohio	Mo.	WL	IN	New Nick	3	3	3	2	4	4	3	3	3	3
Carey, Ohio	N.J.	WL	IN	New Nick	3	3	3	2	3	2	2	3	3	2
Carey, Ohio	Pa.	WL	IN	New Nick	2	2	1	1	3	3	3	2	4	2
Carey, Ohio	Tenn.	WL	IN	New Nick	3	3	3	4	3	3	3	3	3	1
Cashman Leghorn Farm, Webster, Ky.														
Cashman, Ky. (Minn. Poultry, Minn.)	Minn.	Syn xWL	INX	Astronauts	4	4	4	2	3	4	4	4	4	2
Cashman, Ky.	Mo.	Syn xWL	INX	Astronauts	3	3	3	2	3	2	2	2	3	3
Cashman Leghorn Farm, Webster, Ky.														
Cashman, Ky. (Bray Chicks, Ont.)	Alta.	WL	IN	Hi-Cash	4	4	4	3	4	2	2	4	3	3
Cashman, Ky.	Mo.	WL	IN	Hi-Cash	2	2	2	3	3	3	3	2	3	3
Cashman, Ky.	N.J.	WL	IN	Hi-Cash	2	2	3	2	2	3	3	2	3	1
Cashman, Ky.	CNY	WL	IN	Hi-Cash	3	2	4	3	3	3	3	2	3	4
Cashman, Ky.	N.C.	WL	IN	Hi-Cash	2	2	2	3	3	3	3	2	3	4
Cashman, Ky.	Tenn.	WL	IN	Hi-Cash	2	3	3	3	2	2	2	3	2	2
Cashman, Ky.	Texas	WL	IN	Hi-Cash	3	4	2	1	4	2	3	3	2	3
Cashman, Ky. (Sunnyside, Wis.)	Wis.	WL	IN	Hi-Cash	4	4	4	3	4	3	2	4	2	3
Clark's Poultry Farm, Brandon, Manitoba														
Clark's, Man.	C. C.	RIR(LSxRIR)	Paymaster 101	2	2	2	1	3	1	2	2	3	3	4
Colonial Poultry Farms, Pleasant Hill, Mo.														
Colonial, Mo.	Kans.	WL	IN	True-Line 365B	4	4	3	4	3	4	4	4	3	4
Colonial, Mo. (Colonial, Minn.)	Minn.	WL	IN	True-Line 365B	3	3	2	1	3	4	4	4	2	3
Colonial, Mo.	Mo.	WL	IN	True-Line 365B	2	3	2	2	3	3	3	2	2	3
Colonial, Mo.	N.J.	WL	IN	True-Line 365B	2	1	1	3	3	3	3	1	2	2
Colonial, Mo. (Colonial, Ala.)	N. C.	WL	IN	True-Line 365B	3	3	1	3	2	4	4	2	2	3
Colonial, Mo.	Pa.	WL	IN	True-Line 365B	2	2	1	3	3	4	4	1	3	4
Colonial, Mo. (Colonial, Ala.)	Tenn.	WL	IN	True-Line 365B	3	3	3	1	3	4	4	3	3	4
Colonial, Mo.	Texas	WL	IN	True-Line 365B	3	3	1	1	4	3	3	1	2	4
Colonial, Mo. (Colonial, Minn.)	Wis.	WL	IN	True-Line 365B	4	4	3	4	3	3	3	3	3	3
Colonial Poultry Farms, Pleasant Hill, Mo.														
Colonial, Mo.	Mo.	INX	True-Line #142	2	1	1	1	2	2	4	3	2	3	2

RANGE GROUP RANK OF ENTRIES IN RANDOM SAMPLE EGG PRODUCTION TEST (Continued)

ENTRY IDENTIFICATION		TEST	BREEDING	STRAIN OR TRADENAME	INCOME OVER FEED COST (\$)	EGG PRO- DUCTION (Hens housed)	AGE AT 50% PRO- DUCTION (Days)	GROWING MORTALITY (%)	LAYING MORTALITY (%)	EGG WEIGHT (oz)	LARGE AND EXTRA LARGE EGGS (%)	FEED PER EGG (lbs)	ALBUMEN QUALITY (H.U.)	BLOOD SPOTS (%)
Colonial Poultry Farms, Pleasant Hill, Mo.														
Booth, Mo.	.....	Mo.	WL	SX	Super Star	1	1	1	2	2	3	3	1	3
Colonial Poultry Farms, Pleasant Hill, Mo.														
Booth, Mo.	.....	Mo.	WL	SX	Master Mating	2	3	2	2	3	3	4	2	2
Davis, Joe K., Hatchery, Earl, N. C.	.....												
Davis, N. C.	.....	N. H.	RIRxBPR	BX	Davis Combiner	3	3	3	3	4	2	2	3	3
Davis, N. C.	.....	N. C.	RIRxBPR	BX	Davis Combiner	3	2	2	1	1	1	1	4	1
Davis, N. C.	.....	Pa.	RIRxBPR	BX	Davis Combiner	4	4	2	2	3	1	1	4	4
DeKalb Agricultural Assn., Sycamore, Ill.	.....												
Arizona Star, Ariz.	.....	Ariz.		INX	DeKalb 131	2	2	2	2	2	3	2	1	3
DeKalb Agricultural Assn., Sycamore, Ill.	.....												
Arizona Star, Ariz.	.....	Ariz.		INX	DeKalb 151	4	4	2	2	3	2	3	3	1
Demler Farms, Inc., Anaheim, Calif.	.....												
Demler, Calif.	.....	Mo.	WL	SX	Demler D-65	2	2	3	4	1	2	2	2	1
Demler, Calif.	.....	N. J.	WL	SX	Demler D-65	2	3	3	3	2	2	2	3	2
Demler, Calif.	.....	Pa.	WL	SX	Demler D-65	3	4	4	2	4	2	2	3	1
Demler, Calif.	.....	Tenn.	WL	SX	Demler D-65	2	2	3	3	1	2	1	2	2
Demler, Calif.	.....	Texas	WL	SX	Demler D-65	2	2	3	1	1	2	2	3	2
Demler, Calif.	.....	Wis.	WL	SX	Demler D-65	1	1	2	1	1	2	2	1	3
deZeeuw Leghorn Breeder, South Edmonton, Alberta	.....												
deZeeuw, Alta.	.....	Alta.	WL	SX	deZeeuw 752	2	2	3	1	1	4	4	2	3
deZeeuw, Alta.	.....	B. C.	WL	SX	deZeeuw 752	2	3	3	3	3	4	4	2	2
deZeeuw, Alta.	.....	C. C.	WL	SX	deZeeuw 752	2	2	3	1	2	3	3	1	3
deZeeuw Leghorn Breeder, South Edmonton, Alberta	.....												
deZeeuw, Alta.	.....	Alta.	WL	SX	deZeeuw 752A	3	3	2	1	3	2	4	2	2
Erath Egg Farm, Stephenville, Texas	.....												
Walton, Ga. (Erath, Texas)	.....	N. J.	INX	INX	Erath Mestiza	2	1	2	2	1	3	3	1	3
Erath, Texas	.....	N. C.	INX	INX	Erath Mestiza	2	3	1	1	3	4	4	1	4
Walton, Ga. (Erath, Texas)	.....	Tenn.	INX	INX	Erath Mestiza	2	2	1	2	3	3	3	2	4
Erath, Texas	.....	Texas	INX	INX	Erath Mestiza	4	4	2	2	3	3	3	4	4
Walton, Ga. (Erath, Texas)	.....	Wis.	INX	INX	Erath Mestiza	2	2	2	3	2	3	3	2	4
Fisher Poultry Farm, Ltd., Ayton, Ontario	.....												
Fisher, Ontario	.....	Alta.	WL	SX	Fisher 103	1	2	3	3	2	3	2	2	3
Fisher, Ontario	.....	B. C.	WL	SX	Fisher 103	3	3	4	4	4	3	3	2	3
Fisher, Ontario	.....	C. C.	WL	SX	Fisher 103	3	3	3	3	3	2	2	2	4
Fisher Poultry Farm, Ltd., Ayton, Ontario	.....												
Fisher, Ontario	.....	N. B.	RIRxWW	BX	Fisher 503	4	4	1	1	4	2	2	4	1

RANGE GROUP RANK OF ENTRIES IN RANDOM SAMPLE EGG PRODUCTION TEST (Continued)

ENTRY IDENTIFICATION		TEST	BREEDING	STRAIN OR TRADENAME	INCOME OVER FEE AND CHICK COST (\$)	EGG PRO- DUCTION (Hen housed)	AGE AT 50% PRO- DUCTION (Days)	GROWING MORTALITY (%)	LAYING MORTALITY (%)	EGG WEIGHT (oz)	LARGE AND EXTRA LARGE EGGS (%)	FEED PER EGG (lbs)	ALBUMEN QUALITY (H.U.)	BLOOD SPOTS (%)
Fox Den Farms, Cary, N. C.		N. C.	RIR	SX	Little Red Hen	4	4	3	2	3	3	4	3	1
Fox Den, N. C.		B. C.	WL	SX	Garber G 200	2	2	3	1	2	1	2	1	2
Garber Poultry Breeding Farm, Modesto, Calif.		Minn.	WL	SX	Garber G 200	3	4	3	3	2	1	2	3	2
Garber, Calif. (Redline, B. C.)		Mo.	WL	SX	Garber G 200	2	3	3	1	2	2	3	1	2
Garber, Calif. (Fairfax, Minn.)		N. J.	WL	SX	Garber G 200	3	4	2	2	4	2	3	4	2
Garber, Calif.		Pa.	WL	SX	Garber G 200	1	2	2	1	2	2	1	2	2
Garber, Calif.		Texas	WL	SX	Garber G 200	3	3	4	3	4	1	3	1	1
Garber, Calif.		Wis.	WL	SX	Garber G 200	2	3	3	3	2	2	2	1	1
Garber Poultry Breeding Farm, Modesto, Calif.		N. C.	CGxWL	BX	Garber G x 291	2	2	1	2	2	3	2	3	1
Garber, Calif. (Davis, N. C.)		Pa.	CGxWL	BX	Garber G x 291	1	1	1	1	4	3	1	4	2
Garber, Calif.		Tenn.	CGxWL	BX	Garber G x 291	2	2	1	1	2	2	2	3	1
Garber, Calif.		C. C.	WLx(WLxB)		Kanaka White	4	4	4	4	2	2	4	3	1
Gardner, D., Cloverdale, B. C.		N. H.	RIRxWPR	BX	Golden Sex Link	3	3	4	2	2	2	4	2	3
Garrison, Earl W., Bridgeton, N. J.		Pa.	RIRxWPR	BX	Golden Sex Link	3	3	2	4	1	1	4	2	4
Garrison, N. J.		Pa.	RIRxBPR	BX	Black Gold	4	3	3	3	4	1	4	3	2
Garrison, N. J.		Mo.	WL	SX	Gasson's G 33	1	1	3	2	1	4	3	2	2
Garrison, N. J.		Wis.	WL	SX	Gasson's G 33	3	3	3	1	3	3	3	2	2
Gasson's Poultry Farm, Versailles, Ohio		Iowa	WL	SX	Ghostley Pearl 63	-	3	2	3	4	1	-	2	4
Gasson, Ohio		Kans.	WL	SX	Ghostley Pearl 63	1	1	1	1	3	1	1	1	3
Ghostley's Poultry Farm, Inc., Anoka, Minn.		Minn.	WL	SX	Ghostley Pearl 63	3	3	2	2	4	1	1	2	1
Ghostley, Minn.		Mo.	WL	SX	Ghostley Pearl 63	2	1	2	1	2	2	2	1	2
Ghostley, Minn.		N. J.	WL	SX	Ghostley Pearl 63	2	2	3	3	2	2	1	1	3
Ghostley, Minn. (Chick Haven, N. C.)		N. C.	WL	SX	Ghostley Pearl 63	3	3	2	2	3	2	4	2	3
Ghostley, Minn.		Tenn.	WL	SX	Ghostley Pearl 63	2	1	1	1	3	2	2	1	3
Ghostley, Minn.		Texas	WL	SX	Ghostley Pearl 63	1	1	2	2	1	2	1	1	3
Ghostley, Minn.		Wis.	WL	SX	Ghostley Pearl 63	2	3	3	1	3	2	1	2	2
Ghostley's Poultry Farm, Inc., Anoka, Minn.		Pa.	WL	SX	Cage Queen	1	1	1	2	2	3	1	1	2
Wheelock, Pa.		B. C.	WL	SX	Criss Cross H 25	3	4	4	3	4	3	2	2	4
Hansen's Leghorn City, Puyallup, Wash.		Mo.	WL	SX	Criss Cross H 25	2	2	2	2	1	2	3	2	2
Hansen's, Wash. (Oliver, B. C.)		Pa.	WL	SX	Criss Cross H 25	3	4	4	2	3	3	2	2	3
Hansen's, Wash.		Tenn.	WL	SX	Criss Cross H 25	3	3	2	3	2	2	3	2	3
Hansen's, Wash.														

RANGE GROUP RANK OF ENTRIES IN RANDOM SAMPLE EGG PRODUCTION TEST (Continued)

ENTRY IDENTIFICATION	TEST	BREEDING	STRAIN OR TRADENAME	INCOME OVER FEED COST (\$)	EGG PRO- DUCTION (Hens housed)	AGE AT 50% PRO- DUCTION (Days)	GROWING MORTALITY (%)	LAYING MORTALITY (%)	EGG WEIGHT (oz)	LARGE AND EXTRA LARGE EGGS (%)	FEED PER EGG POUND (lbs)	ALBUMEN QUALITY (H.U.)	BLOOD SPOTS (%)
Hanson, J. A. & Son, Corvallis, Oreg.	Mo.	WL SX	Super Nick A	3	3	3	3	3	4	4	3	2	3
Hanson, Oreg.	N. J.	WL SX	Super Nick A	3	2	2	3	1	4	4	3	3	2
Hanson, Oreg.	Mass.												
Harco Orchards & Poultry Farms, South Eastern, Mass.	Mo.	RIRxBPR BX	Sex Link	3	3	3	3	2	1	1	3	2	4
Harco, Mass.	N. B.	RIRxBPR BX	Sex Link	2	3	2	1	2	1	1	3	2	1
Harco, Mass.	N. H.	RIRxBPR BX	Sex Link	2	2	3	1	3	1	1	2	3	4
Harco, Mass.	CNY	RIRxBPR BX	Sex Link	1	1	1	1	2	1	1	1	3	3
Harco, Mass.	Pa.	RIRxBPR BX	Sex Link	4	3	2	2	4	1	1	3	3	2
Hardy, C. Nelson & Son, Essex, Mass.	N. H.	RIRxBPR BX	Sex Link	4	4	4	2	4	3	2	4	3	4
Hardy, Mass.													
Hardy Poultry Farm, Inc., Chester, N. H.	N. H.	Breed Cross	Sex Link	3	3	2	3	4	1	1	3	2	3
Hardy, N. H.													
Heisdorf & Nelson Farms, Redmond, Wash.	Kans.	WL SX	Nick Chick	2	2	2	4	1	3	3	3	2	2
H & N, Wash. (Manhattan, Kans.)	CNY	WL SX	Nick Chick	2	2	1	4	2	3	3	2	1	1
H & N, Wash. (Rich, N. Y.)	N. C.	WL SX	Nick Chick	2	2	1	3	2	2	2	2	1	3
H & N, Wash. (Castletown, N. C.)	Texas	WL SX	Nick Chick	2	2	2	2	1	2	2	2	1	1
H & N, Wash. (Williams, Texas)	Wis.	WL SX	Nick Chick	2	1	3	3	2	3	3	2	1	2
H & N, Wash. (Klongland, Wis.)													
Heisey Leghorn Farms, Mount Joy, Pa.	Pa.	WL SX	H-K-Cross	3	4	4	3	2	3	3	2	3	1
Heisey, Pa.													
Honegger Breeder Hatchery, Forrest, Ill.	B. C.	WL SX	Honegger Layer	1	2	2	1	2	3	3	1	2	2
Honegger, Ill. (Fraser, B. C.)	C. C.	WL SX	Honegger Layer	2	2	2	2	2	3	3	2	2	2
Honegger, Ill. (Steinbach, Man.)	Minn.	WL SX	Honegger Layer	2	2	3	4	3	4	2	2	3	1
Honegger, Ill. (Frost, Minn.)	Mo.	WL SX	Honegger Layer	3	3	2	2	3	2	2	2	2	1
Honegger, Ill.	N. H.	WL SX	Honegger Layer	2	1	1	4	3	4	4	1	3	1
Honegger, Ill.	N. J.	WL SX	Honegger Layer	3	3	2	1	4	3	3	3	3	2
Honegger, Ill. (Carson, N. Y.)	CNY	WL SX	Honegger Layer	3	4	2	3	4	3	4	3	2	2
Honegger, Ill. (Haley, Ga.)	N. C.	WL SX	Honegger Layer	2	1	3	2	1	2	2	2	4	3
Honegger, Ill. (Grumley, Tenn.)	Tenn.	WL SX	Honegger Layer	3	3	3	3	2	3	3	3	2	2
Honegger, Ill. (Grumley, Tenn.)	Texas	WL SX	Honegger Layer	2	2	3	1	2	3	2	3	2	4
Cherokee, Texas (Honegger, Ill.)	Texas	WL SX	Honegger Layer	2	3	2	2	2	1	2	2	2	3
Honegger, Ill.	Wis.	WL SX	Honegger Layer	2	1	1	1	2	3	3	2	3	1
Honegger, Ill. (Sunnyside, Wis.)													
Honegger Breeder Hatchery, Forrest, Ill.	Wis.	Syn xWL BX	Honegger H-80	2	1	1	1	2	3	3	1	4	1
Honegger, Ill. (Sunnyside, Wis.)													

RANGE GROUP RANK OF ENTRIES IN RANDOM SAMPLE EGG PRODUCTION TEST (Continued)

ENTRY IDENTIFICATION		TEST	BREEDING	STRAIN OR TRADENAME	INCOME OVER FEED AND CHICK COST (\$)	EGG PRO- DUCTION (Hen housed)	AGE AT 50% PRO- DUCTION (Days)	GROWING MORTALITY (%)	LAYING MORTALITY (%)	EGG WEIGHT (g)	EGGS LARGE AND EXTRA LARGE (%)	FEED POUND PER EGG (lb/s)	ALBUMEN QUALITY (H.U.)	BLOOD SPOTS (%)
Hubbard Farms, Inc., Walpole, N. H.														
Hubbard, N. H.	.....	N. H.	Syn xNH BX	Golden Comet	1	2	2	1	2	1	2	2	2	2
Hubbard, N. H. (Hubbard, N. C.)	.....	N. C.	Syn xNH BX	Golden Comet	2	2	1	3	1	1	1	2	2	1
Hubbard, N. H.	.....	Pa.	Syn xNH BX	Golden Comet	3	3	1	2	4	1	1	3	3	3
Hy-Line Poultry Farm, Des Moines, Iowa														
Rothway, Ariz.	.....	Ariz.	INX	Hy-Line 934	1	2	2	2	1	1	1	1	4	4
Hy-Line, Iowa	.....	Iowa	INX	Hy-Line 934	-	1	2	1	1	1	-	-	4	3
Hy-Line, Iowa (Hy-Line, Minn.)	.....	Minn.	INX	Hy-Line 934	1	1	3	1	1	2	1	1	4	3
Hy-Line, Iowa	.....	Mo.	INX	Hy-Line 934	3	2	2	2	2	2	2	2	4	1
Hy-Line, Iowa	.....	N. H.	INX	Hy-Line 934	2	2	1	2	3	3	4	1	4	1
Hy-Line, Iowa	.....	Tenn.	INX	Hy-Line 934	2	2	3	2	1	1	1	1	4	1
Hy-Line Poultry Farm, Des Moines, Iowa														
Rothway, Ariz.	.....	Ariz.	INX	Hy-Line 934-D	1	1	2	3	1	3	3	1	4	1
Pioneer, Ont. (Pacific, B. C.)	.....	B. C.	INX	Hy-Line 934-D	3	3	1	1	3	1	2	3	4	2
Hy-Line, Iowa (Hy-Line, Ont.)	.....	C. C.	INX	Hy-Line 934-D	2	1	1	2	1	2	2	1	4	1
Hy-Line, Iowa	.....	Iowa	INX	Hy-Line 934-D	-	1	4	1	1	2	-	-	4	2
Coombs, Kans.	.....	Kans.	INX	Hy-Line 934-D	1	2	3	1	2	1	1	1	4	1
Hy-Line, Iowa	.....	Mo.	INX	Hy-Line 934-D	2	2	2	3	2	3	3	2	3	1
Hy-Line, Ont.	.....	N. B.	INX	Hy-Line 934-D	1	1	1	3	1	3	3	1	4	1
Hy-Line, Iowa (Tar Heel, N. C.)	.....	N. C.	INX	Hy-Line 934-D	1	1	1	1	1	1	1	1	4	1
Hy-Line, Iowa	.....	Tenn.	INX	Hy-Line 934-D	1	1	3	2	1	1	1	1	4	1
Johnson, Texas (Hy-Lay, Texas)	.....	Texas	INX	Hy-Line 934-D	3	3	4	3	2	1	1	1	3	1
Kazmeier, Texas	.....	Texas	INX	Hy-Line 934-D	2	2	3	2	1	2	2	1	4	1
Hy-Lay, Texas	.....	Texas	INX	Hy-Line 934-D	1	1	3	2	2	2	2	1	4	1
Ideal Poultry Breeding Farm, Cameron, Texas														
Ideal, Texas	.....	Mo.	WL	Ideal H-3-W-2	3	3	2	3	3	3	2	2	3	3
Intercontinental, Fla. (Ideal, Texas)	.....	Texas	WL	Ideal H-3-W-2	3	4	4	4	4	3	3	3	3	2
Ideal Poultry Breeding Farm, Cameron, Texas														
Ideal, Texas	.....	Minn.	Syn xWL BX	Ideal 236	4	4	3	4	4	4	4	4	4	2
Ideal, Texas	.....	Mo.	Syn xWL BX	Ideal 236	1	1	2	2	1	2	2	1	3	1
Ideal, Texas	.....	N. J.	Syn xWL BX	Ideal 236	3	3	4	3	4	2	2	3	3	2
Ideal, Texas (Jordan B., Va.)	.....	N. C.	Syn xWL BX	Ideal 236	3	3	2	1	3	3	3	3	4	2
Ideal, Texas	.....	Tenn.	Syn xWL BX	Ideal 236	2	2	2	2	2	2	2	2	4	1
Ideal, Texas	.....	Texas	Syn xWL BX	Ideal 236	1	1	2	1	1	2	1	2	3	2
Jordan, Va.	.....	Texas	Syn xWL BX	Ideal 236	4	4	2	2	4	4	3	4	3	3
Kerr, Dr., Hatcheries, Inc., Minneota, Minn.														
Kerr, Minn.	.....	Minn.	INX	Kerr P-K 26	2	3	1	3	4	3	2	2	2	4

RANGE GROUP RANK OF ENTRIES IN RANDOM SAMPLE EGG PRODUCTION TEST (Continued)

ENTRY IDENTIFICATION	TEST	BREEDING	STRAIN OR TRADENAME	INCOME AND CHICK FEED COST (\$)	EGG PRO- DUCTION (No.)	AGE AT 50% PRO- DUCTION (Days)	GROWING MORTALITY (%)	LAYING MORTALITY (%)	EGG WEIGHT (oz)	LARGE AND EXTRA LARGE EGGS (%)	FEED PER POUND OF EGGS (lbs)	ALBUMEN QUALITY (H.U.)	BLOOD SPOTS (%)
Kimber Farms, Inc., Fremont, Calif.													
Kimber, Calif. (Star Kimberchiks, B. C.) ...	Alta.	WL	SX	Kimber K 137	1	2	2	1	4	2	1	1	2
Arizona State, Ariz.	Ariz.	WL	SX	Kimber K 137	3	3	3	4	4	3	3	1	3
Kimber, Calif. (Star Kimber, B. C.)	B. C.	WL	SX	Kimber K 137	3	2	4	2	3	3	3	1	2
Kimber, Calif. (Scott, Ont.)	C. C.	WL	SX	Kimber K 137	2	3	1	2	3	2	2	1	1
B & C Hatchery, Kans.	Kans.	WL	SX	Kimber K 137	3	2	4	1	3	3	3	1	2
Kimber, Calif. (Longenecker's, Pa.)	Pa.	WL	SX	Kimber K 137	1	1	2	1	3	3	1	1	3
Kimber, Calif. (Nichols, Tenn.)	Tenn.	WL	SX	Kimber K 137	3	3	3	3	3	3	3	1	3
Western, Texas	Texas	WL	SX	Kimber K 137	3	2	3	4	3	3	2	1	1
Kimber Farms, Inc., Fremont, Calif.													
Kimber, Calif.	Iowa	WL	SX	Kimber K 137A	-	4	4	4	3	-	-	1	2
Kimber, Calif. (Cook's, Iowa)	Minn.	WL	SX	Kimber K 137A	4	4	1	4	1	2	3	1	2
Kimber, Calif. (Missouri Valley, Mo.)	Mo.	WL	SX	Kimber K 137A	2	2	2	1	3	2	2	1	2
Kimber, Calif.	N. H.	WL	SX	Kimber K 137A	1	1	1	2	2	4	1	1	1
Kimber, Calif. (Dover, N. J.)	N. J.	WL	SX	Kimber K 137A	1	1	1	2	2	3	1	1	1
Kimber, Calif. (Hubbard, Pa.)	CNY	WL	SX	Kimber K 137A	2	1	2	3	1	2	1	1	2
Kimber, Calif. (Hubbard, N. C.)	N. C.	WL	SX	Kimber K 137A	1	1	1	1	2	3	1	1	2
Kimber, Calif. (Hubbard, Pa.)	Pa.	WL	SX	Kimber K 137A	1	1	2	2	1	4	1	1	2
Kimber, Calif.	Texas	WL	SX	Kimber K 137A	2	3	2	4	2	3	2	1	3
Kimber, Calif. (Wilke's, Wis.)	Wis.	WL	SX	Kimber K 137A	2	2	1	3	2	3	1	2	2
Kimber Farms, Inc., Fremont, Calif.													
Arizona State, Ariz.	Ariz.	WL	SX	Kimber K 141	1	1	2	3	2	3	3	2	2
Kimber, Calif. (Star Kimber, B. C.)	B. C.	WL	SX	Kimber K 141	2	3	2	2	2	2	1	2	1
Kimber, Calif. (Missouri Valley, Mo.)	Mo.	WL	SX	Kimber K 141	2	3	3	2	2	2	2	2	3
Kimber, Calif. (Wilke's, Wis.)	Wis.	WL	SX	Kimber K 141	1	1	2	1	1	2	1	3	4
Klongland Hatchery, Stoughton, Wis.													
Klongland, Wis.	Wis.	CGxWL	BX	K Cross	3	3	3	2	1	2	3	3	1
Lawton, A. C. & Sons, Foxboro, Mass.													
Lawton, Mass.	Mo.	RIRxWPR	BX	Buff Sex Link	4	4	4	2	3	1	4	2	4
Lawton, Mass.	N. H.	RIRxWPR	BX	Buff Sex Link	4	4	4	4	3	1	4	3	3
Lawton, Mass.	CNY	RIRxWPR	BX	Buff Sex Link	2	2	4	3	1	1	2	4	3
Lawton, Mass.	Pa.	RIRxWPR	BX	Buff Sex Link	4	4	3	2	3	1	4	2	4
Manitoba Dairy & Poultry Coop, Winnipeg, Manitoba													
Manitoba, Man.	Alta.	WL	SX	Keyline 110 C	4	4	3	3	4	3	4	2	1
Manitoba, Man.	C. C.	WL	SX	Keyline 110 C	3	3	3	2	3	2	4	1	3

RANGE GROUP RANK OF ENTRIES IN RANDOM SAMPLE EGG PRODUCTION TEST (Continued)

ENTRY IDENTIFICATION		TEST	BREEDING	STRAIN OR TRADENAME	INCOME OVER FEED AND CHICK COST (\$)	EGG PRO- DUCTION (No.)	AGE AT 50% PRO- DUCTION (Days)	GRADING MORTALITY (%)	LAYING MORTALITY (%)	EGG WEIGHT (oz)	LARGE AND EXTRA LARGE EGGS (%)	FEED PER EGG POUND (lbs)	ALBUMEN QUALITY (H.U.)	BLOOD SPOTS (%)
Nelson, George F., Truro, Nova Scotia														
Nelson, N.S.														
Noble Bros, Orangeville, Ontario														
Noble, Ont.														
North Central Regional Poultry Br. Lab., Lafayette, Ind.														
North Central Regional, Ind.														
North Central Regional, Ind.														
North Central Regional, Ind.														
North Central Regional, Ind.														
North Central Regional, Ind.														
North Central Regional, Ind.														
North Central Regional, Ind.														
Parks Poultry Farm, Altoona, Pa.														
Parks, Pa.														
Parks, Pa. (Keystone, Pa.)														
Parks, Pa.														
Parks, Pa. (Keystone, Pa.)														
Parks Poultry Farm, Altoona, Pa.														
Keystone, Pa.														
Parks Poultry Farm, Altoona, Pa.														
Parks, Pa.														
Parks, Pa.														
Pennsylvania-Indiana Farm Bureau, Grantville, Pa.														
Pa.-Ind. Farm Bureau, Pa.														
Pa.-Ind. Farm Bureau, Pa.														
Pa.-Ind. Farm Bureau, Pa.														
Pa.-Ind. Farm Bureau, Pa.														
Pa.-Ind. Farm Bureau, Ind.														
Pennsylvania-Indiana Farm Bureau, Grantville, Pa.														
Pa.-Ind. Farm Bureau, Pa.														
Pa.-Ind. Farm Bureau, Ind.														
Pa.-Ind. Farm Bureau, Pa.														
Pa.-Ind. Farm Bureau, Pa.														
Pa.-Ind. Farm Bureau, Ind.														
Rapp Leghorn Farm, Inc., Farmingdale, N. J.														
Leghorn, N.J.														
Schuyler Poultry Farms, LeRoy, N. Y.														
Schuyler, N. Y.														

RANGE GROUP RANK OF ENTRIES IN RANDOM SAMPLE EGG PRODUCTION TEST (Continued)

ENTRY IDENTIFICATION	TEST	BREEDING	STRAIN OR TRADENAME	INCOME OVER FEED AND CHICK COST (\$)	EGG PRO- DUCTION (Hen housed)	AGE AT % PRO- DUCTION (Days)	GROWING MORTALITY (%)	LAYING MORTALITY (%)	EGG WEIGHT (oz)	LARGE AND EXTRA LARGE EGGS (%)	FEED PER EGG (lbs)	ALBUMEN QUALITY (H.U.)	BLOOD SPOTS (%)
Shaver Poultry Breeding Farm, Galt, Ontario													
Shaver, Ont.	Alta.	WL	SX	288	1	1	1	1	1	1	1	3	1
Shaver, Ont. (Sanders, B. C.)	B. C.	WL	SX	288	3	2	2	3	1	1	3	3	3
Shaver, Ont.	C. C.	WL	SX	288	1	1	2	3	1	1	1	2	3
Shaver, Ont. (Silver Lake, Minn.)	Minn.	WL	SX	288	1	1	1	1	2	1	1	3	4
Shaver, Ont.	Mo.	WL	SX	288	1	1	3	3	1	1	1	3	3
Shaver, Ont.	N. B.	WL	SX	288	1	1	1	1	2	2	1	4	3
Shaver, Ont.	N. J.	WL	SX	288	1	1	2	1	1	1	1	3	1
Shaver, Ont. (Lakeland, N. Y.)	CNY	WL	SX	288	2	2	2	3	2	2	1	4	4
Shaver, Ont. (Mid-Valley, Va.)	N. C.	WL	SX	288	1	1	2	2	1	1	1	3	2
Greider, Pa.	Pa.	WL	SX	288	2	2	2	4	3	3	1	3	2
Shaver, Ont.	Tenn.	WL	SX	288	2	2	2	4	2	1	2	2	3
Shaver, Ont.	Texas	WL	SX	288	2	2	3	3	1	1	2	4	2
DeWitt's, Texas	Texas	WL	SX	288	2	3	3	4	2	2	2	4	3
Shaver, Ont. (Matthews, Wis.)	Wis.	WL	SX	288	2	2	3	3	2	2	2	3	2
Shaver Poultry Breeding Farm, Galt, Ontario													
Shaver, Ont.	Mo.	WL	SX	292	1	2	2	2	3	2	1	3	2
Greider, Pa.	Pa.	WL	SX	292	3	3	4	1	2	2	2	3	2
Shaver Poultry Breeding Farm, Galt, Ontario													
Shaver, Ont.	N. B.	RIR	SX	555	4	4	4	3	4	3	4	1	2
St. Augustin Cooperative Hatchery, St. Augustin, Quebec	Quebec												
St. Augustin, Que.	C. C.	WL	SX	Corvette A1	3	3	3	2	3	2	3	2	3
Starline Breeders Hatchery, Saskatoon, Saskatchewan													
Starline, Sask.	Alta.	CGxWL	BX	Pearlette	3	3	2	4	3	4	3	4	3
Starline, Sask.	B. C.	CGxWL	BX	Pearlette	4	4	3	1	3	3	4	4	2
Starline, Sask.	C. C.	CGxWL	BX	Pearlette	3	3	2	2	2	3	3	4	1
Stever Hatchery, Huntingdon, Pa.													
Garrison, N. J.	N. J.	WL	SX	Stever SC-300	3	3	4	2	2	3	3	2	4
Garrison, N. J. (Stever, Pa.)	N. C.	WL	SX	Stever SC-300	3	2	4	2	1	4	3	2	1
Stever, Pa.	Pa.	WL	SX	Stever SC-300	2	2	3	3	3	4	1	2	2
Garrison, N. J.	Tenn.	WL	SX	Stever SC-300	3	4	4	1	4	2	3	3	3
Stone's Poultry Farm, Dinuba, Calif.													
Pratt's, Ariz.	Ariz.	WL	SX	Stone's H 56	3	2	1	1	1	4	4	3	4
Stone's, Calif. (Napier, B. C.)	B. C.	WL	SX	Stone's H 56	1	1	1	1	1	4	1	2	1
Stone's, Calif.	Iowa	WL	SX	Stone's H 56	-	3	2	3	4	-	-	2	1
Stone's, Calif. (Hoover, Iowa)	Minn.	WL	SX	Stone's H 56	2	2	1	3	3	4	4	2	3
Stone's, Calif.	N. J.	WL	SX	Stone's H 56	2	2	3	2	2	3	2	2	1

RANGE GROUP RANK OF ENTRIES IN RANDOM SAMPLE EGG PRODUCTION TEST (Continued)

ENTRY IDENTIFICATION	TEST	BREEDING	STRAIN OR TRADE NAME	INCOME OVER FEED & CHICK COST (\$)	EGG PRO- DUCTION (Hens housed)	AGE AT 50% PRO- DUCTION (Days)	GROWING MORTALITY (%)	LAYING MORTALITY (%)	EGG WEIGHT (oz)	LARGE AND EXTRA LARGE EGGS (%)	FEED PER EGG POUND (lbs)	ALBUMEN QUALITY (H.U.)	BLOOD SPOTS (%)
Sturtevant Farms, Inc., Halifax, Mass.	N. H.	RIRxBPR BX	Black Sex Link	3	3	4	1	2	1	1	1	3	3
Sturtevant, Mass.													
Sturtevant Farms, Inc., Halifax, Mass.	N. H.	RIRxWPR BX	Goldies	3	3	4	3	1	1	1	1	3	2
Sturtevant, Mass.													
Sunnyside Hatchery, Watertown, Wis.	Wis.	CGxWL BX	Wisco White	3	3	1	1	4	3	4	3	4	3
Sunnyside, Wis.													
Sykes, F & G Ltd., Warminster, England	B. C.	WLxRIR BX	Hybrid 3	3	3	2	4	4	1	2	3	3	3
F & G Sykes, England	Mo.	WLxRIR BX	Hybrid 3	2	1	1	1	2	3	3	2	3	3
F & G Sykes, England	Wis.	WLxRIR BX	Hybrid 3	3	3	1	1	4	3	3	2	3	4
F & G Sykes, England													
Townline Poultry Farm, Zeeland, Mich.	Mo.	WL SX	Townline SC 30	3	3	3	4	3	3	3	3	1	3
Townline, Mich.													
Triska, Eric, Edmonton, Alberta	Alta.	WL SX	Belmont 292	2	2	3	2	2	2	1	2	2	2
Triska, Alta.	C. C.	WL SX	Belmont 292	2	2	3	1	1	2	2	3	2	1
Triska, Alta.													
Triska, Eric, Edmonton, Alberta	Alta.	WL SX	Belmont 292 A	3	3	4	1	3	1	1	2	2	2
Triska, Alta.													
University of Tennessee, Knoxville, Tenn.	Tenn.	WL PS	Pure Line	4	4	3	3	3	3	4	4	2	4
Univ. of Tenn., Tenn.													
Warren, J. J., Inc., North Brookfield, Mass.	B. C.	RIRxRIW BX	Sex-Sal-Link-F	3	3	3	1	2	1	1	4	3	2
Warren, Mass. (Redline, B. C.)	N. H.	RIRxRIW BX	Sex-Sal-Link-F	2	3	4	2	2	3	3	2	3	2
Warren, Mass.	CNY	RIRxRIW BX	Sex-Sal-Link-F	1	1	3	1	1	1	1	2	3	1
Warren, Mass.	Wis.	RIRxRIW BX	Sex-Sal-Link-F	2	4	4	2	2	1	1	4	1	2
Warren, Mass. (Swift, Iowa)													
Webster Poultry Farm, Auburn, N. Y.	CNY	RIR SX	New Red	3	3	2	2	4	3	3	3	4	2
Webster, N. Y.													
Welp's Breeding Farm, Bancroft, Iowa	Iowa	WL SX	Welp Line 910	-	1	1	1	1	3	-	-	3	1
Welp's, Iowa													
Welp's Breeding Farm, Bancroft, Iowa	Iowa	WL SX	Welp Line 937	-	2	3	4	2	4	-	-	3	2
Welp's, Iowa	Kans.	WL SX	Welp Line 937	3	4	4	4	2	3	2	4	3	2
Welp's, Iowa (Weis, Nebr.)	Minn.	WL SX	Welp Line 937	2	2	2	3	2	4	3	2	3	2
Welp's, Iowa	Mo.	WL SX	Welp Line 937	2	2	2	2	1	3	3	1	3	3
Welp's, Iowa	N. C.	WL SX	Welp Line 937	3	3	3	3	3	4	3	1	3	3
Welp's, Iowa (Cowen, Ga.)	Tenn.	WL SX	Welp Line 937	2	2	2	2	3	3	3	1	2	3
Welp's, Iowa	Texas	WL SX	Welp Line 937	2	2	2	2	2	4	3	1	3	1
Welp's, Iowa	Wis.	WL SX	Welp Line 937	3	2	2	4	2	3	3	2	4	3
Welp's, Iowa (Pleasant Valley, Wis.)													



